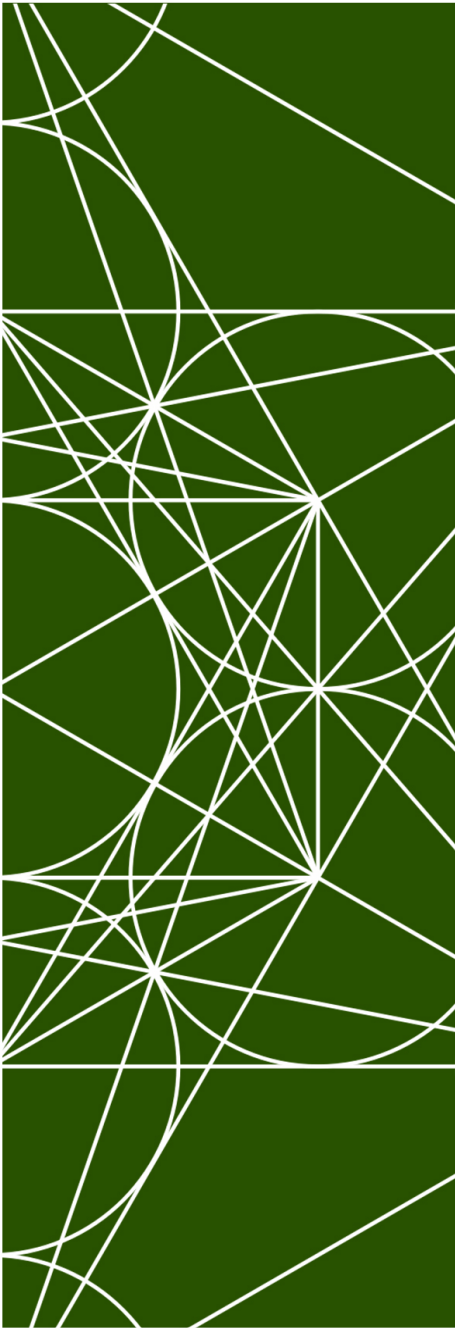




MSRJ

UNIVERSITY OF TEXAS AT ARLINGTON
**MCNAIR SCHOLARS RESEARCH
JOURNAL 2019**

VOL. 23



Preparing UTA students for careers in
research and teaching since 1990

University of Texas at Arlington McNair Scholars Research Journal

Volume 23 • 2019

*Preparing UTA Students for Careers in Research and
Teaching since 1990*

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MESSAGE

*FROM THE
VICE PRESIDENT
FOR RESEARCH*

James P. Grover, Ph.D.



Research is vital to the discovery, invention, and innovation driving our world. It is no coincidence that research is an activity of emphasis at the world's greatest universities. Research is learning at the highest level, and obtaining an education through engagement with research has lifelong benefits through its development of the skills of obtaining evidence, evaluating it and analyzing it, drawing conclusions from it, and communicating these conclusions to others. As a nationally-ranked Research-1 university, our vision reflects the way in which education and research come together to meet the needs of our students and our community. The vision also highlights our strategic research areas and how they support the overarching goal of 'Global Impact Through Enabling a Sustainable Megacity', which is important to our region as the Dallas-Ft. Worth-Arlington metroplex heads quickly toward becoming a megacity.

The McNair Scholars Program plays an important role at UTA in providing experiential learning to prepare promising students from low-income/first-generation or under-represented backgrounds for a successful transition to a PhD program. The program helps students realize their dreams and ambitions by providing the academic support, mentoring and research opportunities necessary to become more competitive in applying for a PhD program and to be well prepared to start their graduate work. Engaging in research as an undergraduate can give you the preparation needed to be a successful PhD student, if research is a passion for you. Obtaining a PhD degree takes tremendous dedication and persistence, but it is also a tremendous accomplishment, opening a wide range of career opportunities.

The efforts that prepare students to earn a doctoral degree, which the McNair Scholars Program helps accomplish, establish a foundation for a lifetime of discoveries and contributions that will shape our future. These students will be the innovators and entrepreneurs who develop the technologies that transform the results of those discoveries into improvements in health, education, and economic growth.

The University of Texas at Arlington is proud to be a supporter of the McNair Scholars Program, which has provided opportunities to so many undergraduates over the last 30 years to help them reach their full academic

MESSAGE FROM THE VICE PRESIDENT

and professional potential. Those of us who have been privileged to work with McNair Scholars and to witness the transformation from students to scholars are impressed with their sophistication and, as mentors, take great pride in their accomplishments. A special thanks to the faculty who have mentored them. At UTA, we are also proud to have several previous McNair Scholars from other institutions as members of our faculty.

Congratulations Scholars on your acceptance into the program. You have completed impressive work. It is work that portends an exciting future for you and for the promise your future contributions will make.

NOTES

FROM THE DIRECTOR

Joan Reinhardt, Ph.D.



I salute McNair Scholars at The University of Texas at Arlington on their many achievements during spring and summer of 2019. They have committed much thought, energy, and time to their various research efforts. I also thank their mentors for the guidance and encouragement that they provide to McNair Scholars as they face new challenges preparing for future advanced studies in their disciplines. Most of our summer 2019 researchers will graduate this academic year and begin graduate school by fall of 2020. Senior year is a busy one for McNair Scholars as they take the GRE, attend conferences, and apply to graduate programs while simultaneously completing their degree requirements. I am pleased to see our Scholars advance towards their goals and begin the next phase of their education. New Scholars will join the McNair program in early spring semester to fill positions vacated by those who graduate this year.

The McNair Scholars program is a national initiative to encourage acquisition of the PhD and a career in research and teaching at the university level among undergraduates from first-generation/low-income and/or underrepresented ethnicities/races. In the 2019 edition of The University of Texas at Arlington McNair Scholars Research Journal, thirteen Scholars present to you their research findings which illustrate what undergraduates at this Research I institution can achieve, whatever their economic, educational, or ethnic/racial background, when offered the opportunity. Such experiential learning is often truly life-changing for the undergraduates who choose to engage in it. In the last thirty years, many Scholars have participated in this federal TRIO program on their way to even greater accomplishments. They have been well prepared at UT Arlington for the future that awaited them.

In conclusion, I would like to thank President Vistasp Karbhari, Provost Teik Lim, the former Vice

President for Research Duane Dimos, and the current interim Vice President for Research Dr. James Grover, in addition to the Dean of the Library Rebecca Bichel. I would also like to express gratitude to those faculty members who over the last several decades have shown support for the program by serving on the McNair Selection Committee and/or as faculty mentors (often more than once!).

ABOUT

THE MCNAIR SCHOLARS PROGRAM

The McNair Scholars Program (officially known as the Ronald E. McNair Post-Baccalaureate Achievement Program) came to the campus of The University of Texas at Arlington in 1990. Created by the U.S. Congress in 1988, it is named after Dr. Ronald E. McNair, who perished with his fellow astronauts on the space shuttle Challenger two years earlier. The McNair program endeavors to assist talented undergraduates – either first generation and low-income or underrepresented students – to prepare for graduate study leading to the Ph.D. and the professoriate.

Since its beginning at UT Arlington, the McNair program has encouraged and assisted over 300 students in various majors. Currently, it works with 34 students each academic year, providing seminars and classes on topics related to graduate school and the GRE, a May institute to heighten scholars' understanding of the culture of research, and a summer research internship. The program also provides guidance with the graduate school application process and travel funds to participate in conferences and visit prospective graduate programs. UT Arlington McNair graduates have subsequently earned masters and doctorates not only from their alma mater, but also from an impressive array of universities including Harvard, Indiana, Rice, and Southern Methodist, among others.

The McNair Scholars Program enjoys strong support from the UT Arlington administration and greatly benefits from the expertise and enthusiasm of both faculty and staff. Faculty members who serve on the McNair Selection Committee and those who act as mentors to McNair interns deserve special recognition. Members of the 2019-2020 Selection Committee include the following UTA faculty and staff: The committee was Dr. Joe Jackson (the Graduate School), Dr. Laureano Hoyos (Civil Engineering), Dr. Karishma Chatterjee (Communication Studies), Dr. Amber Schroeder (Industrial and Organizational Psychology, and Dr. Debra Woody (Social Work).

McNair Staff Members



Joan Reinhardt, Ph.D.
Director



Cheri Counts
*Administrative Assistant
(prior to January 2020)*



Natalie Stephens, M.Ed.
Coordinator

SCHOLARSHIPS

Kathryn A. Head Scholarship Winner

In Summer of 2019 the Kathryn A. Head Scholarship for McNair Scholars was awarded to Ryne Dingler, a Physics major engaged in program-sponsored research mentored by Dr. Benjamin Jones. Ryne was selected for this award based on his essay, GPA, letters of recommendation, and commitment to pursuing research and the professoriate. The scholarship honors the long and exemplary career of Kathryn A. Head, former director of the McNair Scholars Program and SOAR Learning Services. The scholarship committee includes Natalie Stephens, Undergraduate Research Programs, Coordinator I; Jennifer Luken-Sutton, Student Support Services Director; Dr. Alan Bowling, Associate Professor, Mechanical and Aerospace Engineering, and former McNair mentor. We thank our committee members for their commitment to selecting the best candidate for this honor, and we congratulate Ryne on receiving it.

Friends of the UTA Library, Scholarship Winners

The annual Friends of the UT Arlington Library McNair Scholarship was awarded to Ryne Dingler (Physics) and Ciara Mason (Anthropology) for their McNair research presentations and papers. The scholarship recipients are determined by the excellence of the Scholars' oral research presentations and papers, as assessed by members of the Friends McNair Scholarship Committee: Brittany Griffiths, UTA Libraries, Publication Specialist; Milaun Murry, UTA Libraries, Experiential Learning Outreach Specialist; and Dr. Kelly Visnak, UTA Libraries, Associate University Librarian – Scholarly Communications. The McNair Scholars Program congratulates its 2019 scholarship winners and thanks the UTA Library for their continued support. Special thanks to Rebecca Bichel, Dean of the UTA Library and the Friends of the UTA Library.



From left to right: Natalie Stephens, Ryne Dingler, and Joan Reinhardt

McNair Papers

Summer Research

Volume 23 • 2019

OBSERVATION OF THE RELATIONSHIP BETWEEN HISTORY EDUCATION, RACIAL OUTGROUP CONTACT, AND PREJUDICE

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ABSTRACT

In the 2017 Unite the Right Rally, white supremacists stated they were defending “White History.” This incited a discussion about the role history has in current racial prejudice. Allport’s Intergroup Contact Theory states that intergroup conflict will reduce if opposing groups contact each other. Some groups do not have the ability to interact with each other, eliminating direct contact. Using the contact theory, this study observes how history can serve as an indirect form of contact that may reduce racial prejudice in the United States. Using Amazon’s Mechanical Turk, 120 participants completed a questionnaire observing history education, outgroup attitudes, and contact with outgroups. Correlations were then analyzed for all participants in a sample of only White participants. The results coincided with three hypotheses: those with high history value have a positive correlation with outgroup attitudes; as more history classes are taken, there is more contact; and the more outgroup classes an individual takes, the less group narcissism exists. In the classroom and legislature, history curriculum is a debated topic. The findings of this study indicate that multicultural history education is beneficial in reducing prejudice and increasing outgroup contact.

In August 2017, Unite the Right, a white supremacist rally, was held in Charlottesville, Virginia. White supremacists of various groups came out to protest the taking down of the statue of General Robert E. Lee in Market Street Park. While this group was protesting, a counter group emerged to protest the racist and prejudicial beliefs this group was exhibiting. These beliefs would lead a young white supremacist participating in the rally to drive a car through the counter-protesters, injuring 32 people and killing a Charlottesville woman, Heather Heyer (Astor, Caron, & Victor, 2017). This protest exposed and highlighted the connection between U.S. history and prejudice. Many people were shocked to see the racist attitudes that were openly displayed, causing people to examine American history to determine the foundation from which these attitudes arose. Defenders of the Unite the Right rally claimed that they were defending “White History” and “White America” (Zhang & Clark, 2018). With these racist and prejudicial beliefs becoming more widely expressed in the United States, people are wondering what can be done.

One of the most effective forms of reducing prejudice is by practicing the principles of Intergroup Contact Theory. Intergroup Contact Theory was developed by Gordon Allport in 1954 in his book, *The Nature of Prejudice* (1954). His theory of intergroup contact outlined that conflicting groups can reduce prejudice by working together in a positive manner. Allport hypothesized that to improve intergroup relations, four conditions must be present. The four conditions are the following: All groups must have equal standing, work cooperatively, strive for the same or similar goals, and an authoritative figure (or relevant authorities in general) should be present to promote positive intergroup relations. In 2006, a meta-analysis was conducted to examine the evidence for Intergroup Contact Theory (Pettigrew & Tropp, 2006). It analyzed 515 studies to determine the current condition of the evidence for Intergroup Contact Theory. This meta-analysis found that contact between groups is strongly associated with reduced intergroup prejudice. Although the four conditions in Allport’s theory promote positive intergroup relations, further research has found that these conditions are not strictly necessary. Although this study was an effective meta-analysis, it was limited to examining direct contact cases. Direct contact is effective but has various limitations.

Direct contact, which is face-to-face contact, is the most widely researched method of contact in the Intergroup Contact Theory (Pettigrew & Tropp, 2011). However, it still has its limitations. Direct contact is an effective way of reducing prejudice, yet it is not feasible in segregated groups or areas of conflict (Brown & Paterson, 2016). Even if direct contact is an option, groups may still hold anxieties that prevent the groups from interacting with each other (Richeson & Shelton, 2007). Despite these impediments, direct contact research dominates the study of intergroup contact, which has severely limited research on indirect contact (Pettigrew & Tropp, 2011). Future intergroup contact research will seek to understand the function of indirect contact at a deeper level and relationships dealing with the prejudice between various groups (Dovidio, Love, Schellhaas, & Hewstone, 2017). This paper indicates that although there is a way to reduce prejudice, the effectiveness across different types of groups is unknown.

Indirect contact—intergroup interaction without face-to-face contact—has seen a rise in research over the last 23 years. This increase in indirect contact research emerged from the lack of contact that some groups developed. Either because of segregation or anxieties, these groups refuse or cannot communicate with each other. Several types of contact have developed under the broader category of indirect contact, but the main forms are extended contact, vicarious contact and imagined contact. Indirect contact predicts direct contact and helps reduce intergroup anxiety, not just momentarily but longitudinally (Wölfer et al., 2019).

The extended contact hypothesis emerged in 1997, introducing indirect contact into the contact theory literature (Wright et al., 1997). The extended contact hypothesis states that positive outgroup attitudes will develop if an individual has knowledge of a close relationship between an ingroup member and someone from an outgroup. This is not bound to friendships and applies to any sort of positive contact

between groups (Eller, Abrams, & Gomez, 2012). Extended contact reduces prejudice in three ways: it reduces anxieties when encountering outgroups, it encourages intergroup contact, and it facilitates understanding for individuals to take on the perspective of interacting with an outgroup member (Brown & Paterson, 2016; Turner, Hewstone, Voci, & Vonofakou, 2008).

As the extended contact hypothesis emerged in research, other researchers started developing related hypotheses concerning indirect contact. In 2009, the imagined contact hypothesis was developed. This hypothesis argues that when a person creates a positive interaction in their mind and thoughts, it enables them to positively interact more with an outgroup in real situations of contact (Crisp & Turner, 2009). Even if that cognitive effort to imagine is difficult, it is still effective in reducing intergroup anxieties (Birtel & Crisp, 2012). For example, children who were asked over three weeks to imagine an interaction with an outgroup immigrant member had less implicit prejudice and more positive explicit interactions with other immigrant children (Vezzali, Capozza, Giovannini, & Stathi, 2012). In a short amount of time, attitudes could change.

The vicarious contact hypothesis states that by observing an interaction between ingroup and outgroup members, individuals can mirror the observed behaviors and reduce intergroup anxiety when the two groups interact (Mazziotta, Mummendey, & Wright, 2011). Vicarious contact, although similar to extended contact, differs because an ingroup member is directly observing an interaction with an outgroup member. This follows the example of Bandura's social cognitive theory that by observing the behavior of others, the behavior observed will be applied to one's own behavior (Bandura, 1986). Vicarious contact effectively reduces prejudice when three conditions are present: first, when both groups experience a positive interaction and both advance in their goals; second, when the contact is clearly observed; third, when both members have positive representations in their groups in the interaction (Mazziotta, Mummendey, & Wright, 2011).

Although these are three main forms of indirect contact (extended, vicarious, and imagined), less mainstream forms of contact have also emerged. One is media contact, that is, contact with outgroups through the observation of television and news formats. For instance, college students were asked to watch a film about the life of a homosexual politician. Watching this film showed an increase in positive attitudes towards homosexual men (Riggle et al., 1996). In another example of media contact, participants' beliefs in African American stereotypes decreased after they were exposed to counter-stereotypic examples of African American celebrities (Ramasubramanian, 2010).

Virtual contact is similar to media contact in that communication is through social media or the internet; virtual contact, however, is made directly with a member of an outgroup through a technology (Dovidio et al., 2017). The monitored environment the internet provides can be ideal for contact. The drawback is that effects are not as strong as other forms of contact (White, Abu-Rayya, & Weitzel, 2014). Virtual contact encourages the use of technology in prejudice reduction. For example, the mimicking aspect of virtual reality (VR) technology was shown to reduce prejudice in Palestinian-Israeli relations. The study used a VR headset to create the interaction with the outgroup in which the outgroup mimicked the participant's body movements (Hasler, Hirschberger, Shani-Sherman, & Friedman, 2014).

Pettigrew and Tropp (2008) indicate that although there is a plethora of research in intergroup contact, it is not being appropriately applied to social policy. The research is present, but the applicability is questioned by those in other fields, such as political science. This indicates that more research should be implemented to make effective changes in society. Previous studies indicate that social psychology can help reduce ethnic prejudice (Lemmer & Wagner, 2015). Although psychology classes are offered in secondary education, they are not as available as history classes are. An example of a program that incorporates history into reducing prejudice is Facing History and Ourselves. This organization incorporates historical analysis into education in order to teach school-age children values of equality and democracy (Facing

History and Ourselves, 2019). This program is not implemented in every school in the United States but is used expansively.

History is essential in forming the American identity. However, when that identity is taken to an extreme, it can be harmful towards other groups. Group narcissism, also known as collective narcissism, is the inflation of confidence in one's group regarding recognition and greatness (Golec de Zavala, 2018). High levels of group narcissism are associated with negative attitudes towards outgroups. For example, those with low levels of group narcissism and national group identification were associated with warmer attitudes towards Latino immigrant outgroups in the United States (Lyons, Coursey, & Kenworthy, 2013).

Every school district requires some sort of history class throughout high school. In the past, very few to no studies have extensively looked at history as a form of indirect contact. One study has looked at various forms of contact, comparing direct and indirect contact with a group of physically disabled people and used history as an exercise to teach high school students about this group (Krahe & Altwasser, 2006). However, this was limited because the historical exercise was presented with a variety of different exercises or forms of contact.

Little research has explored the topic of history as a form of reducing prejudice but multicultural teaching and education has been observed in the past to reduce prejudice. An example of this is a study in which children participated in an 11-week course that practiced a multicultural approach (McGregor, 1993). Within this course examples of history cases were mentioned. The prejudice level towards outgroups of White children significantly decreased.

Media contact is a similar form of contact to learning about history. In both forms, a person is observing media, a document, or article about events or figures. However, because of the time gap in history, historians and societies have time to develop an understanding of the events that happened. There is less bias in history than in current events because the concept has passed and people observe the event in a less biased way.

This current study is exploratory in nature because of the few studies that have been previously conducted and examined in this area. Various groups throughout the world have intergroup conflict. These groups developed conflict through historical events such as war, genocide, and political conflict. In their pathbreaking work *History Education and Conflict Transformation* (2017), Psaltis, Carretero, and Čehajić-Clancy presented the first treatment of history education as a method to resolve conflict.

Current Study

The purpose of this study is to observe the relationship between history education, various forms of contact, and prejudice. This study will observe that relationship by learning about the history education participants have received and their attitudes towards outgroups. Prejudice is one measure but other measures such as group narcissism and contact with other groups are influential to the level of prejudice people have. Following the Intergroup Contact Theory and the literature that follows it, the study proposes three hypotheses: (1) People who have a high value for history will have a positive attitude for racial outgroups in the United States, (2) People who have taken more history classes will have positive attitudes towards racial outgroups in the United States, and (3) People who learn more about racial outgroups in the United States share a negative relationship with group narcissism. This study will look at various racial groups, and Muslim Americans, a group whose increasing prejudices are becoming prevalent. Instead of one in order to see the relationship history education shares with various attitudes towards various groups.

Methods

Participants and Procedure

This study recruited 120 anonymous participants through Amazon's Mechanical Turk (MTurk). One filtering condition was set that would allow only participants who have a U.S. bachelor's degree. Once the questionnaire was collected and approved, participants were granted \$2.00 USD. Although the study collected responses from a total of 120 participants, 17 were excluded from the final analysis due to the unreliability of their responses or under-qualifications. The unreliability was caused by the nature of the independent online environment. MTurk workers are in their own environment, are not restricted to the task, and have the freedom to perform other tasks on their computers or in their environment. Other workers may not complete the task conscientiously and may thus hastily complete it to collect the compensation. Although there was a filter set to allow only participants with a U.S. bachelor's degree, some participants did not report this level of education and did not qualify for the study. The final analysis included 103 participants. Participant ages ranged from 22 to 68. The average age of the sample was 40.08, and the median age was 36. The racial/ethnic makeup of the sample was 2.9% African American ($n = 3$), 4.9% Asian ($n = 5$), 83.5% White ($n = 86$), 3.9% Hispanic/Latino ($n = 4$), 1% Native Hawaiian/Other Pacific Islander ($n = 1$), 1% Middle Easterner/Northern African/Arab American ($n = 1$), and 2.9% Biracial ($n = 3$). The gender distribution was nearly equal, with 55.3% Male ($n = 57$) and 44.7% Female ($n = 46$). The majority of participants were United States citizens (94.2%). The remaining were Indian citizens $n = 4$ (3.9%), Canadian citizens $n = 1$ (1%), and one with no response.

The data was collected through MTurk by posting the questionnaire on the MTurk marketplace, where participants complete the questionnaire in exchange for compensation. Participants read about the study and then selected it to begin. Mturk instructed users to open a link in a new tab that took the user to Qualtrics. The questionnaire began on the UTA Qualtrics website. The survey started with a consent statement, followed by a demographics section, then the questionnaire. Once all the scales and measures were collected, a code appeared at the end of the survey. The participant then returned to MTurk and entered the code into the Survey Code box. This study was approved by the Institutional Review Board (IRB) at the University of Texas at Arlington.

Key Survey Variables

History Values. Because there is no noted scale used to measure subjective or perceived value of history, we created one. The history values scale is a 9-item scale (Cronbach's $\alpha = .775$) that assesses the degree to which the participant values the study of history. The question (e.g., "History is valuable") is asked then answered using a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). See Appendix A for the full list of items.

Classes Taken. The survey asked participants how many classes they had taken in relation to regions of the world studied. These classes were assigned to racial groups based on the geography the group is historically concentrated in. This was asked for both high school and college level classes (see Appendix B).

Outgroup Attitudes. Outgroup Attitudes was measured by asking participants how warmly or positively they felt about a range of outgroups using a *feelings thermometer*, ranging from 1 (*coldest*) to 100 (*warmest*). The more comfortable a participant's feelings with this group, the higher the score (see Appendix C).

Narcissism. Two measures of narcissism were collected, group narcissism and a self-report of

individual narcissism. A series of questions were asked to determine how strongly participants felt about their American identity (see Appendix D). This scale has a good reliability ($\alpha = .828$). Participants were asked to self-report their level of individual narcissism by asking them how much they agreed with the statement, “I am a narcissist (Note: Narcissist means Egotistical, self-focused and vain,)” using a scale from 1 (*not very true of me*) to 7 (*very true of me*).

Group Contact. There are two measures of group contact. The initial measure is close friends contact (CFC), which asks participants how many of their friends belong to a certain outgroup (see Appendix E). The other measure, Quantity of Contact (QoC), asks about how much they come in contact with certain outgroups in different contexts of their lives (see Appendix F).

Results

The data collected was analyzed using the Statistical Package for the Social Sciences (SPSS) version 25.0. A Pearson’s correlation was used to examine the relationship between the variables of history values, total classes, total outgroup attitudes, and group narcissism. This relationship was observed and tested across all participants.

Table 1. General Participant Attitudes

Table 1									
<i>General Participant Attitudes</i>									
Variable	Mean(SD)	1	2	3	4	5	6	7	
1. History Values	5.0(1.91)	-							
2. Total Classes	6.37(3.94)	.475**	-						
3. Group Narcissism	4.26(1.22)	.465**	.225*	-					
4. Individual Narcissism	2.55(1.84)	-.42**	-.096	-.115	-				
5. Average Outgroup Attitudes	60.52(20.46)	.227*	-.015	-.014	-.101	-			
6. Close Friend Contact All	2.85(.99)	-.684**	-.245*	-.328	.372**	.053	-		
7. Quantity of Contact All	12.1(22.41)	-.773**	-.352**	-.488**	.339**	.297**	.626**	-	

*Note: n value varies because of no forced response, * = $p < .05$, ** = $p < .001$*

Overall, there are many significant relationships with history values. History values is positively related to average outgroup attitudes, ($r(82) = .227, p = .04$), and with total classes ($r(102) = .475, p < .001$). However, it has a negative relationship with the remaining variables: individual narcissism, ($r(102) = -.42, p < .001$), all CFC, (Close Friend Contact) ($r(99) = -.684, p < .001$), and all QoC, (Quantity of Contact) ($r(101) = -.773, p < .001$). History classes share a positive relationship with group narcissism ($r(103) = .225, p = .022$). In opposition, it shares negative relationships with all CFC, ($r(100) = -.245, p < .001$) and all QoC, ($r(102) = -.352, p < .001$). Group narcissism shares a negative relationship with all QoC, ($r(102) = -.488, p < .001$) and all CFC, ($r(102) = -.328, p = .001$). Group narcissism correlations have a positive relationship with history values ($r(102) = .465, p < .001$), and total classes taken, ($r(103) = .225, p = .022$). (For further relationships, see Table 1).

White Participants Only. The following Pearson correlations observed the attitudes of White participants on outgroups in the United States. These correlations observed the variables, history values, group narcissism, individual narcissism, outgroup attitudes, CFC, and QoC, in relation with each outgroup.

Instead of looking at overall averages, the variables were directly related to the outgroup correlated with history classes taken. The groups observed were Latinos (Hispanic), African Americans, Asian Americans, and Muslim Americans. Individual trends within the group will be looked at first, and at the end overall trends between all the groups will be discussed. Throughout all the groups, history values share a positive relationship with group narcissism, ($r(85) = .482$, $p < .001$) and a negative relationship with narcissism ($r(85) = -.44$, $p < .001$).

Table 2. White Participant Prejudice Towards Latinos

Variable	Mean(SD)	1	2	3	4	5	6	7	8
1. History Values	4.97(1.96)	-							
2. Total Latin American Classes	1.15(2.15)	-.819**	-						
3. Group Narcissism	4.24(1.22)	.482**	-.48**	-					
4. Individual Narcissism	2.6(1.94)	-.44**	.486**	-.107	-				
5. Latino American Outgroup Attitudes	57.17(28.84)	.497**	-.472**	.262**	-.417**	-			
6. Latino Immigrant Outgroup Attitudes	60.74(26.5)	.179	-.049	.027	-.138	.757**	-		
7. Latino CFC	5.91(13.26)	-.345**	.598**	-.263	.449**	-.414**	.019	-	
8. Latino QoC	18.01(30.847)	-.813**	.947**	-.452	.59**	-.546**	.144**	.654**	

Note: n value varies because of no forced response, ** = $p < .001$

The following results cover the Latin American group. History values share a positive relationship with the variable Latino American attitudes ($r(85) = .497$, $p < .001$). History values share a negative correlation with Latin American history classes, ($r(85) = -.819$, $p < .001$), Latino CFC, ($r(86) = -.345$, $p = .001$); and Latino QoC ($r(84) = -.813$, $p < .001$). Latin American history classes share a positive relation with individual narcissism, ($r(86) = .486$, $p < .001$), Latino CFC, ($r(86) = .598$, $p < .001$); and Latino QoC, ($r(84) = .947$, $p < .001$). Group narcissism shares a positive relationship with Latino American attitudes, ($r(86) = .262$, $p = .008$). (For further relationships, see Table 2).

Table 3. White Participant Prejudice Towards African Americans

Variable	Mean(SD)	1	2	3	4	5	6	7
1. History Values	4.97(1.96)	-						
2. Total African American Classes	1.33(2.04)	-.739**	-					
3. Group Narcissism	4.24(1.22)	.482**	-.447**	-				
4. Individual Narcissism	2.6(1.94)	-.44**	.573**	-.107	-			
5. African American Outgroup Attitudes	57.17(28.84)	.054	.052	.001	-.081	-		
6. African American CFC	60.74(26.5)	-.447**	.532**	-.305**	-.418**	-.08	-	
7. African Americans QoC	5.91(13.26)	.209*	.091	.204*	.184*	.172	-.052	-

Note: n value varies because of no forced response, * = $p < .05$, ** = $p < .001$

In the African American group, history values share a positive relationship with African American QoC, ($r(85) = .209, p = .028$). History values also share a negative relationship with African history classes, ($r(85) = -.739, p < .001$), and African American CFC, ($r(85) = -.447, p < .001$). African history classes share a positive relationship with individual narcissism, ($r(86) = .573, p < .001$) and African American CFC, ($r(86) = .532, p < .001$), and a negative relationship with group narcissism, ($r(86) = -.447, p < .001$). (For further relationships, see Table 3).

Table 4. White Participant Prejudice Towards Asians

Table 4 White Participant Prejudice Towards Asians									
Variable	Mean(SD)	1	2	3	4	5	6	7	8
1. History Values	4.97(1.96)	-							
2. Total Asian History Classes	1.29(2.27)	-.795**	-						
3. Group Narcissism	4.24(1.22)	.482**	-.487**	-					
4. Individual Narcissism	2.6(1.94)	-.44**	.517**	-.107	-				
5. Asian American Outgroup Attitudes	66.08(21.5)	.184*	-.137	.175	-.173	-			
6. Asian Immigrant Outgroup Attitudes	62.29(25.61)	.169	.012	.097	-.078	.837**	-		
7. Asian CFC	3.09(6.484)	-.248**	.466**	-.148	.348**	.206*	.158	-	
8. Asian QoC	2.38(1.13)	.231**	-.160	.154	-.205*	-.07	.185	-.137	-

Note: n value varies because of no forced response, * = $p < .05$, ** = $p < .001$

Attitudes in the Asian American group show different patterns from the first two groups. History values are positively related with Asian American attitudes, ($r(85) = .184, p = .046$), and Asian American QoC, ($r(84) = .231, p = .017$). History values also share a negative relationship with Asian history classes, ($r(85) = -.795, p < .001$), and Asian American CFC, ($r(85) = .231, p = .011$). Asian history classes are positively correlated with individual narcissism, ($r(86) = .517, p < .001$), and Asian American CFC, ($r(86) = .466, p < .001$). On the other hand Asian history classes have a negative relationship with group narcissism, ($r(86) = -.487, p < .001$). (For further relationships, see Table 4).

Table 5. White Participant Prejudice Towards Muslim Americans

Table 5 White Participant Prejudice Towards Muslim Americans										
Variable	Mean(SD)	1	2	3	4	5	6	7	8	9
1. History Values	4.97(1.96)	-								
2. Total Middle Eastern History Classes	1.36(2.39)	-.827**	-							
3. Group Narcissism	4.24(1.22)	.482**	.454**	-						
4. Individual Narcissism	2.6(1.94)	-.44*	.541**	-.107	-					
5. Muslim American Outgroup Attitudes	56.01(29.98)	.217	.14	.091	-.121	-				
6. Muslim Immigrant Outgroup Attitudes	57.57(28.86)	.156	.124	.03	-.104	.948**	-			
7. Islam Prejudice	47.13(29.24)	.216	.007	.09	-.151	.603**	.65**	-		
8. Muslim CFC	3.67(7.84)	-.398**	.559**	-.267**	-.459**	.228*	.25*	.097	-	
9. Muslim QoC	13.27(25.33)	-.823**	.894**	-.436**	.442**	.186	.216*	.143	.31**	-

Note: n value varies because of no forced response, * = $p < .05$, ** = $p < .001$

Muslim Americans is the last group and observes similar patterns to the first three groups. The relationship of Muslim Americans to middle eastern history is due to the historical roots of Islam in the middle east. History values share a negative relationship with Middle Eastern history classes, ($r(85) = -.827, p < .001$); Muslim CFC, ($r(85) = .398, p < .001$); and Muslim QoC, ($r(84) = -.823, p < .001$). Middle Eastern history classes share a positive correlation with the variables: individual narcissism, ($r(86) = .541, p < .001$); Muslim CFC, ($r(86) = .559, p < .001$); and Muslim QoC, ($r(85) = .894, p < .001$). These classes also share a negative relationship with group narcissism, ($r(86) = -.454, p < .001$). Group narcissism is negatively associated with Muslim CFC, ($r(86) = -.267, p < .001$), and Muslim QoC, ($r(85) = -.436, p < .001$). (For further relationships, see Table 5).

The rest of the results section discusses the general trends seen across the groups. Opposed to the positive relationship between history values and classes taken with all participants, there is a negative relationship between history values and classes taken in relation to their corresponding outgroups. See column 1, row 2 of Table 2, Table 3, and Table 4. There is an initial positive relationship between history values and average outgroup attitudes, and when broken down into White participants and specific outgroups, the relationship is still positive except for the outgroup of African Americans, ($r(85) = .054, p = .312$).

Some trends were found throughout all groups and others had strong relationships only in some groups. Asian, ($r(86) = -.487, p < .001$); African ($r(86) = -.447, p < .001$); or Latin American, ($r(86) = -.48, p < .001$) history classes share a negative relationship with group narcissism. This finding is in agreement with what initially is found in Table 1, which shows a negative relationship with total classes and group narcissism. For Asian, ($r(86) = .466, p < .001$); African ($r(86) = .622, p < .001$); Latin American, ($r(86) = .598, p < .001$); and Middle Eastern, ($r(86) = .559, p < .001$), history classes, there is a positive relationship between CFC and the corresponding outgroup. For both Latinos, ($r(84) = .947, p < .001$), and Muslims ($r(85) = .894, p < .001$), there is a positive relationship between history classes and QoC with each group.

Outgroup attitude trends found in the general correlations continued to be represented in the individual groups. There was a consistent positive relationship between history values and outgroup attitudes in all the outgroups, but there was no relationship between history values and immigrant groups such as Latino, ($r(69) = .179, p = .073$); Asian, ($r(68) = .169, p = .085$); and Muslim, ($r(86) = .156, p = .204$).

Discussion

The purpose of this study was to determine if there is a relationship between history education, levels of prejudice towards outgroups in the United States, and contact with those groups. This means looking at different variables of prejudice and contact. Overall, varying relationships were found across groups and some even oppose what was initially found in the general trends. These trends will help determine the validity of the hypotheses proposed initially.

The first hypothesis states that people who have a high value for history will have a positive attitude for racial outgroups in the United States. The study found a positive relationship between history values and general outgroup attitudes. This represents the idea that valuing history leads to warmer perceptions of outgroups. It could also indicate that having warmer outgroup attitudes leads to a greater value for history. This was in the general participants' attitudes. When broken down further into separate racial categories, this trend was represented in only two target outgroups: Latinos and Asian Americans. The other two groups, African Americans and Muslim Americans, showed no relationship between outgroup attitudes and the value of history. The relationship between contact and history value is generally negative. History

values share a positive relationship with outgroup attitudes but also a negative relationship with contact: this may indicate that an individual may hold positive attitudes towards an outgroup, yet fear to contact these groups. Within these outgroup attitudes, history values share no relationship with immigrant outgroup attitudes across Latin American, Asian, and Muslim immigrant groups. History outlines the journeys of many groups into the United States. While these stories are portrayed in history classes, there is no relationship between taking such history classes and warmth towards immigrants.

The second hypothesis tests the relationship that people who have taken more history classes will have positive attitudes towards racial outgroups in the United States. In the general analysis, the study found no relationship between the number of history classes taken and general outgroup attitudes. The difficulty of collecting accurate data on how many classes participants took may be one reason no relationship was found. While younger participants might have taken history classes only a few years ago, making such information easier to remember, older participants would have taken classes decades ago.

When history classes were broken down into the racial groups, the only relationship present was a negative relationship between Latin American history classes and Latino outgroup attitudes (Table 2). Although positive attitudes were not found, across all groups there was a relationship with CFC. This finding opposes the general finding that there is a negative relationship between all classes and CFC. The finding in the racial groups indicates that those who have taken more classes about outgroups have more friends in that outgroup. In the future, this relationship should be examined to see if the friendships encourage the classes, or vice versa. This shows that there is a connection between history classes and contact with racial outgroups. There is a strong positive connection within the Latino (Table 2) and Muslim American (Table 5) groups with QoC. Ultimately, this study finds no relationship between positive attitudes and history classes, but it does find a connection between the classes and contact.

The final hypothesis proposes that people who learn more about racial outgroups in the United States share a negative relationship with group narcissism. The study finds that group narcissism shares a positive relationship with total history classes and a negative relationship with QoC. When the data is broken down into the groups, a negative relationship between group narcissism and the corresponding history classes taken (Table 2, Table 3, and Table 4) is shown; the only exception is the Muslim group (Table 5). When initially looking at the general relationships, the study found QoC and group narcissism had a negative relationship, but the only groups sharing the negative correlation are the African American (Table 3) and Muslim groups (Table 5). Those who take more classes associated with racial outgroups have a lower level of group narcissism.

Limitations

The open environment that MTurk workers have made them susceptible to becoming distracted or rushing through the task for compensation. To eliminate distractions in the future, participants could complete the survey in an environment controlled by the experimenter. This controlled environment allows participants to focus entirely on the task, thereby producing more reliable results.

The study collected the participants' historical background but their education and perspective on these outgroups could greatly vary depending on the state or region in which they completed their education. Depending on the state where a person took their history classes, beliefs about why events happened could differ. Individuals can overestimate how their state contributes to United States history (Putnam, Ross, Soter, & Roediger, 2018). This overestimation of state contribution represents that each state is learning varied versions of history that do not completely align with one narrative of U.S. history. States' could also alter their history because of a past negative relationship with an outgroup that they may want to conceal

or justify. In future research, this background information must be taken into consideration when testing these groups for attitudes based on history. Because the analysis is correlational, only a relationship and not an effect could be observed from this data. Different statistical analyses and experimental setups could lead to finding direct effects of history classes, contact, and prejudice. Participants may have also struggled with recalling the number of classes they have taken. Participants relied on their own memory, which can be unreliable, especially if it had been years or decades since they had taken the classes. Without direct proof of the number of classes, the results should be treated as a beginning into the observation of this relationship between history classes, contact, and outgroup attitudes.

Future Directions

Previous studies have stated that although there is a wide variety of research in intergroup contact, it is not being implemented as policy or action (Pettigrew & Tropp, 2008). Instead of being used to create new policies or plans, the research should inform programs that are already in place. History classes allow students to examine and learn about other cultures in order to create a deeper understanding about different groups. Culturally diverse history classes proposed to create a more diverse high school education, however, have been opposed by individuals who consider them to be politically “divisive.” For example, while some legislators pushed for a Mexican American high school history class proposed in Texas, others argued that “hyphenated American” topics and classes were divisive (Swaby, 2018). Some educators, such as a Florida high school principal, claimed that the Holocaust is not “factual” and should not be taught (Kesslen, 2019). Although there is great conflict on what should be included in historical education, a multicultural approach in history should be implemented.

This research is the beginning of observing the relationship between history education and prejudice. The data in this study is limited. However, in the future more data should be collected to define the relationship between these two concepts. Once a relationship is established, steps should be taken to see how this research should be used to address and implement policy.

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Appendix A

History Values

1. I enjoy learning about history.
2. I learned a lot in my history classes
3. History classes should be taught more
4. I think history is important
5. I learned about different groups of people in history classes
6. History is valuable
7. Taking a history class was a choice for me
8. History is boring (Reversed)
9. Studying history is not a waste of time

Point Likert Scale

- 1 = Strongly Disagree
 2 = Disagree
 3 = Somewhat Disagree
 4 = Neither agree nor disagree
 5 = Somewhat Agree
 6 = Agree
 7 = Strongly Agree.

Appendix B

Classes Taken

Participants are asked how many classes they took of the following categories in high school and then in college. Scale was from 1 to 9, corresponding with the number of classes they have taken, then 10+ for 10 or more classes.

- Asian History
- African History
- American History
- European History
- Latin American History
- Middle Eastern History
- Other History

Appendix C

Participants are asked how warmly they feel about a group, using the following statement.

Please rate how you feel in general about (**Group**) on this thermometer that runs from zero (0) to a hundred (100) degrees. The higher the number, the warmer or more favorable you feel towards (**Group**). The lower the number, the colder or less favorable you feel about (**Group**). If you feel neither warm nor cold towards them as a group, select 50.

The statement is followed by a dragging scale from 0 to 100 for participants to indicate their warmth towards the group. This scale measures feelings towards the following groups:

- White Americans
- Black Americans
- Latino/Hispanic Americans
- Asian Americans
- Muslim Americans
- Latino/Hispanic Immigrants
- Muslim Immigrants
- European Immigrants
- Asian Immigrants
- Islam as a religion

Appendix D

Group Narcissism

1. Americans will never be satisfied until we get all that we deserve.
2. America expects a lot from other countries.
3. America wants to amount to something in the eyes of the world.
4. If America ruled the world it would be a much better place.
5. America insists upon getting the respect that is due.
6. America deserve a lot of respect from other countries.
7. America is an extraordinary country.
8. We as America know that we are good because everyone says so.
9. America likes to be complimented.

10. America's destiny is to be the greatest nation of all.
11. We Americans think that America is a special country.
12. Somebody should someday write a history of America
13. America is the best country in the world.

7-Point Likert Scale

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Somewhat Disagree
- 4 = Neither agree nor disagree
- 5 = Somewhat Agree
- 6 = Agree
- 7 = Strongly Agree.

Appendix E

Close Friends Contact

1. How many of your close friends are Black?
2. How many of your close friends are White?
3. How many of your close friends are Asian?
4. How many of your close friends are Hispanic?
5. How many of your close friends are Muslim?

7-Point Likert Scale

- 1 = None
- 2 = Very Few
- 3 = Less than half
- 4 = About half
- 5 = The majority
- 6 = Almost all
- 7 = All.

Appendix F

Quantity of Contact

Participants were asked how often they have contact/interactions with racial groups in the

United States using a Likert Scale (1 = None at All to 5 = A Great deal, 6 = Not Applicable)

Context

1. At work
2. In my free time
3. At School
4. At religious Services
5. Over all social situations

Group Contact

- How often do you have contact/interactions with Whites?
- How often do you have contact/interactions with Blacks?
- How often do you have contact/interactions with Asians?
- How often do you have contact/interactions with Hispanics?
- How often do you have contact/interactions with Muslims?

INTERSECTING OPPRESSIONS: RECOVERING THE HISTORY OF THE INSTITUTE FOR THE DEAF, DUMB AND BLIND COLORED YOUTH

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ABSTRACT

Created out of the vision of an African-American man who had no known prior experience with educating those with disabilities, William H. Holland, the Texas Institute for Deaf, Dumb and Blind Colored Youth (1887-1967) was one of a number of segregated Southern schools that served African American youth with disabilities. By and large, these schools' history has yet to be explored. The Institute's initial policies directly challenged widely held white expectations about the capabilities of African Americans with disabilities and African Americans in general. As shown by historical research in the Institute's archival and published records, the Institute's early years also complicate disability studies scholars' and historians' use of the term "asylum." The unique history of founder William H. Holland, along with the strong presence of almost exclusively African American staff, also highlights the emergence of Black leadership in education and the longstanding intersections between race, disability, and civil rights. The eventual shift to an "asylum" with "inmates" around 1900, in turn, intersects with the beginnings of mass incarceration and the rise of Jim Crow. Future research plans include collecting oral history narratives from former students and their family members and extending the narrative to the 1960s.

African Americans with disabilities have historically faced oppression on two intersecting fronts: race and disability. The intersection of race and disability constructs has made for a singular experience termed “simultaneous oppression” (Burch & Joyner, 2007; Stuart, 1992; Raines, 1983; Staples, 1999; Washington, 2007). According to Stuart, this simultaneous oppression divides disabled African Americans from their abled-bodied peers and affects them in three ways: limited or no individuality and identity, resource discrimination, and isolation from African American community and family (Stuart, 1992). These factors may also result in higher rates of life dissatisfaction for African Americans with disabilities. (Outlaw, 2001; Smith & Alston, 2009).

Due to limited resources, racism, and stigma about disability, as well as the ways in which notions of race and disability intersected, many African Americans with cognitive, psychosocial, sensory, and physical disabilities found themselves in the care of state-run facilities— asylums, state prisons, and homes for the blind and deaf—during the late nineteenth to mid-twentieth centuries (Burch & Joyner, 2007; Carlson, 2001; Staples, 1999). Moreover, in Southern states, the facilities that held these individuals were segregated both by race and in disbursements of funds (Staples, 1999). Created out of the vision of an African American man who had no known prior experience with educating those with disabilities, William H. Holland, the Texas Institute for Deaf, Dumb and Blind Colored Youth (1887-1967) was one of a number of segregated Southern schools that served African-American youth with disabilities (Corcoran, 2012; Tobak, 2006).

Texas’s segregated Institute, later renamed the Blind, Deaf and Orphan Colored School, is historically significant for both disability studies and African American studies, since its origins and development not only help to illuminate the intersection of race and disability as a singular experience but also highlight the emergence of Black leadership in education and the longstanding intersections between race, disability, and civil rights. The Institute’s initial policies directly challenged widely held White expectations about the capabilities of African Americans with disabilities and African Americans in general (Stuart, 1992). As shown by historical research in the Institute’s archival and published records, the Institute’s early years also complicate disability studies scholars’ and historians’ use of the term “asylum.” The eventual shift from an “institute” with “pupils” to an “asylum” with “inmates” around 1900, in turn, intersects with the beginnings of mass incarceration and the rise of Jim Crow (Rose, 2017).

Intriguingly, this historic school was opened in response to the political and philanthropic desires of an African American legislator, William H. Holland, and its development would be facilitated by other African Americans (Corcoran, 2012; Tobak, 2006; 1870s: William H. Holland, n.d.). As little has been investigated about this school’s origins and development or the experiences of its alumni and staff, archival and historical research into the Institute for the Deaf, Dumb and Blind Colored Youth provides scholars a significant snapshot into historical disability terminology, race relations, Black leadership, and the broader historical significance of segregated Southern institutions for African Americans with disabilities.

Historical Context

To place the Institute for Deaf, Dumb and Blind Colored Youth in context, we must first consider the political, economic and civil climates faced by African Americans in Texas during the nineteenth century. So, too, must we explore the complexities and added discrimination faced by people with disabilities at the time. In the state of Texas, enslaved Africans were not told of their freedom until June 19, 1865, now referred to as the Juneteenth holiday. Freed people were an enigma after having been treated as nothing

more than property for hundreds of years—posing a concern shared by many politicians on the state and national levels (Crouch & Madaras, 2007; Pitre, 1985; Smallwood, 1981). In response to emancipation and African American men gaining the right to vote, Black men began to be elected to the state legislature, leading to advancements for African Americans that, in many cases, are still visible today, with some of the most influential being Historically Black Colleges and Universities (Pitre, 1985). Despite these accomplishments, the majority of African Americans in Texas remained a subjugated and disenfranchised class purposely limited by the legislative decisions of the Texas government (Crouch & Madaras, 2007; Smallwood, 1981).

In response to the emancipation of enslaved Africans throughout the South, Texas, like many other states in the South, created a new constitution that would incorporate the newly freed Blacks. The Texas Constitution of 1866 was drafted by the Eleventh Legislature and included a series of laws referred to as the Black Codes, which were designed to limit the rights of freedmen by perpetuating plantation culture of the past (Crouch & Madaras, 2007; Smallwood, 1981). Despite many early twentieth century historians' view that the Texas Black codes were less severe than other Southern states, historian Walter T. Chapin has shown that Texas's codes nevertheless were intended to “insure” that African Americans “would remain a cheap, docile, and disciplined source of labor” (Crouch & Madaras, 2007). The Black codes were “exacting,” and Whites could provide “additional coercions” to a “politically powerless, physically defenseless people” (Crouch & Madaras, 2007). These coercions included holding Black sharecroppers and plantation workers liable for upholding contracts of service to their White employers despite poor treatment and denying them the opportunity to switch employers freely if better opportunities arose (Crouch & Madaras, 2007). Prewar plantation culture and power dynamics were also preserved by the fact that whole families were obligated to work under one employer; legal threats of jail time as well as fines were also used to enforce the requirement that all able-bodied African Americans of working age did so (Crouch & Madaras, 2007; Smallwood, 1981). As Crouch and Madaras explain, legislators defined “vagrants” as “fortunetellers who were not licensed to exhibit “tricks or cheats in public”; prostitutes; professional gamblers or those who kept houses for them; beggars of alms not afflicted with a disablement, physical malady, or misfortune; habitual drunkards; and “persons who stroll idly about the streets of town[s] or cities, having no local habitation, and no honest business or employment” (Crouch & Madaras, 2007).

The implementation of lien laws, apprenticeship laws, restrictions on the right to bear arms, and vagrancy statutes led to the initiation of legalized forced labor (Crouch & Madaras, 2007). In short, the Black codes, on a large scale, produced a labor force that was undereducated, destitute, and docile to White supremacy. Crouch and Madaras explain: “The Eleventh Legislature provided for the beginning of convict leasing, no doubt realizing that blacks would be sentenced to the penitentiary in droves” (Crouch & Madaras, 2007). The residual effects of these practices can still be observed in African American communities today: African Americans comprise just 13 percent of the nation's overall population but 60 percent of those incarcerated. In addition to laying the foundation for mass incarceration, “[the Black codes] initiated, perhaps intentionally, the incipient stages of segregation and Jim Crowism” (Crouch & Madaras, 2007).

Amid all of this legislative pushback on freedom, the Texas Freedman's Bureau, which existed from 1866 to 1868, was an attempt by the federal government to assist African Americans in navigating their way as newly freed people (Crouch & Madaras, 2007; Smallwood, 1981). Recognizing the propensity of some Southern Whites to continue the plantation culture of the past, as seen in the 1866 constitution, the federal government opened offices of the Freedman's Bureau in cities that had large African-American

populations (Crouch & Madaras, 2007). Attempting to prevent the abuse and misuse of African Americans made vulnerable in labor contracts because of their slavery-limited educations, the Freedman's Bureau overturned many illegal and biased contracts between White employers and Black workers, including *Sally Ross v. J.W. Marise* in Robertson County and *Samuel Morgan v. Patrick Lyons* in Seguin. In these two cases as well as other urban ones, the Freedman's Bureau ruled in the favor of the African American complainants (Crouch & Madaras, 2007). Unfortunately, the Freedman's Bureau did not protect the far larger population of African Americans living in the rural areas of the state where plantation culture persisted (Crouch & Madaras, 2007; Smallwood, 1981).

Historically, cultural, political, social, and medical constructions of “disability” have restricted individuals' opportunities to advance, just as with race. Under the Social Model of disability, as detailed by disability studies scholar Tom Shakespeare (2013), society itself poses the largest threat to the advancement of people with disabilities. Through “social oppression, cultural discourse, and environmental barriers”—not medical pathology—people with disabilities have been marginalized from mainstream life. Disability studies scholar L. J. Davis likewise contextualizes the modern terms of “normalcy” and “normality,” contending that “...(the) problem is not the person with disabilities, the problem is the way that normality is constructed to create the problem of the person with disabilities” (2013). Just as the freedom of enslaved Africans led to reactionary legislation throughout the country in order to limit their development, so too were “Ugly Laws” passed to control the visibility of those with disabilities (Schweik, 2009). Beginning in the mid-to-late nineteenth century, laws and ordinances throughout the country were passed in order to relegate those with disabilities to roles as either a source of entertainment or a blemish on the American landscape. Under the assumption that people with disabilities were of a lower economic status, the first Ugly Law forbidding the appearance in public of the “unsightly” was passed in San Francisco in 1867 in order to restrict begging. Such ordinances would persist in cities throughout the nation well into the twentieth century (Schweik, 2009).

During the early nineteenth century, strides were made to assist those who were born deaf or blind with obtaining the same opportunities to pursue a normative, as well as advanced, level of education (Edwards, 2012). Children with these disabilities sometimes found teachers willing to educate them, but generally children with these disabilities, and their families, found themselves in a precarious situation, often either attending school with minimal instruction or not attending at all (Edwards, 2012). These lags in the educational system would prompt the opening of the deaf, dumb and blind school in Washington D.C. In 1857, the 34th Congress passed H.R. 806 which chartered the grammar school Columbia School for the Deaf and Dumb and Blind, that had been opened by Amos Kendall in 1856 after he became aware of several blind and deaf students who were not being sufficiently cared for in the city (Edwards, 2012). The passing of this legislation and the appointment of Edward Minor Gallaudet as the first superintendent initiated the long history of Gallaudet University and altered the limitations placed on those with disabilities (Davis, 2012; Edwards, 2012).

Influence of William H. Holland

To appropriately and adequately depict the historical relevance of the Institute for Deaf, Dumb and Blind Colored Youth, one must first begin by examining the life of its founder William H. Holland (Corcoran, 2012; Tobak, 2006). Born enslaved on a plantation in Marshall, Texas, the year of his birth is believed to fall between 1841 and 1849, as no official records were maintained for the births of slaves (Corcoran, 2012; Holland, William H., n.d.; Tobak, 2006; 1870s: William H. Holland, n.d.). Little is known about his childhood, but in the late 1850s, the future secretary of the state of Texas, Captain Byrd (Bird)

Holland, purchased William's freedom as well as that of his two brothers, Milton and James, whom Captain Holland had fathered with a enslaved woman named Matilda, owned by his brother Spearman Holland (Lucko, 2010; 1870s: William H. Holland, n.d.). As a Black enslaved woman of the time, Matilda would have had no legal rights to her sons, as she herself was viewed only as property (Battles, 2016; Glasrud & Pitre, 2008). It remains unclear whether her relationship with Captain Holland was voluntary or coerced, but White men's use of Black enslaved women for forced sexualized gratification was a common practice at the time (Battles, 2016; Glasrud & Pitre, 2008; Williams, 2019). After emancipating his children, Captain Bird Holland served as secretary of state from March 1861 to November 1861, during which time Texas seceded from the United States and joined the Confederacy. After his eight-month term as secretary of state, Captain Holland served in the Confederate Army, dying at the Battle of Pleasant Hill in Louisiana in 1864 at the age of 54. Prior to his death, Captain Holland had fathered an additional two children by his wife, Matilda Rust, a White woman (Lucko, 2010).

After having his freedom purchased by his father, William H. Holland and his brothers were sent north to Ohio, where they attended a school established in Southeast Ohio, Albany Academy, in response to the widespread lack of educational options for Blacks (1870s.; Holland, William H., n.d. ; Randolph, 2002; Tobak, 2006; Waite, 2001). Although no records disclose why Holland's father purchased the freedom of his children or sent them north, aspirations for Black men in Texas were limited (Anderson, 1988). Due to the extreme restrictions on education of Blacks in the South, Captain Holland's decision to send them North could be perceived as an attempt to provide young William and his brothers with the opportunity to surpass the restricted futures that they would have encountered as Black men in Texas at that time (Anderson, 1988; Crouch & Madaras, 2007; Woodson, 1918).

Initially established in 1851 as Albany Academy and later renamed the Albany Manual Labor Academy and then Albany Manual Labor University (Randolph, 2002), the school that the boys attended was one of many that arose out of White hostility to African American education. Despite being a "free" state upon its entrance into the Union and a popular safe haven on the Underground Railroad, education for African Americans in Ohio was a highly debated topic. In an 1827 editorial in the *Ohio State Journal*, for instance, an anonymous author wrote, "If we enlighten [African Americans'] minds by education, what a new world of misery does open to their view. Knowledge would open their eyes to their present degraded state—their incapacity of enjoying the rights of citizenship, or of being received into the social interests of the Whites as friends. They would be rendered uneasy with their condition, and, seeing no hopes of improvement, would harbor designs unfriendly to the peace and permanency of our institutions" (Randolph, 2002). Ultimately, African Americans in Ohio found no recourse but to established schools of their own (Randolph, 2002).

After the first "educational Black law" was passed in Ohio's legislature in 1829, it became legal for White schools to prohibit the entrance of African American students (Randolph, 2002). However, the state also ruled that tax money that had been collected from working African Americans for schools was to be returned to these communities for the establishment of dedicated Black schools. Historian and scholar Carter G. Woodson recorded that between the late 1820s and early 1830s Blacks in Ohio had established schools in "Logan, Clark, Columbiana, Guernsey, Jefferson, Highland, Brown, Darke, Shelby, Green, Miami, Warren, Scioto, Gallia, Ross, and Muskingum counties" (1918). The founding of these schools laid the groundwork for the eventual founding of Albany Enterprise Academy in 1851, and furthermore the building blocks of the education of William H. Holland; Holland and his brothers would attend Albany Enterprise Academy upon their arrival in Ohio (1870s: William H. Holland, n.d.; Tobak, 2006). This would become especially relevant when the original Albany Manual Labor University

became a segregated institution and changed its name to Franklin College (Randolph, 2002). Responding to this change, Blacks in Ohio created their own institution, which was owned, run, and operated by African Americans: the Albany Enterprise Academy (Randolph, 2002). In its 1864 constitution, the Albany Enterprise Academy would boldly state: “To this end we have established ALBANY ENTERPRISE ACADEMY, to be owned and controlled by colored persons.” The constitution explained the founders’ “desire to demonstrate the capacity of colored men to originate and successfully manage such a school, believing that such a demonstration will afford an argument in favor of the colored man which none can gainsay” (Randolph, 2002). Being a product of Albany Enterprise Academy during such a critical and transformational point in African American history would play a major role in shaping William H. Holland’s political and educational activism later on.

Ironically, Captain Holland’s sons served the Union even as he lost his life fighting for the Confederacy. Following the brothers’ time at the Albany Enterprise Academy, Milton Holland joined the fifth United States Colored Troops and received a Congressional Medal of Honor for his heroic acts during the New Market Heights Battle in September of 1864 (1870s: William H. Holland, n.d.; Corcoran, 2012; Lucko, 2010; Tobak, 2006). William joined the war in October of the same year and enlisted in the Union Army’s Sixteenth Colored Troops Regiment, which was organized in Nashville, Tennessee, but included men from Ohio as well (Lucko, 2010; 1870s: William H. Holland, n.d.; Tobak, 2006). During his time in the Union Army, William Holland participated in the Battles of Nashville and Overton Hood and served in garrison duty in Chattanooga, Tennessee.

In 1867, after his service in the Civil War, William Holland set his focus on obtaining a higher education by entering Oberlin College in northeast Ohio (1870s: William H. Holland, n.d.; Tobak, 2006). In 1834, Oberlin had become the first college to admit African-American students, which encouraged the development of a more highly educated population of Blacks, later termed the “talented tenth” (Waite, 2001). In his 1903 essay “The Talented Tenth” (2018), Du Bois argued that “the talented tenth of the Negro race must be made leaders of thought and missionaries of culture among their people.” Oberlin College was a key venue for constructing an environment in which African Americans could aspire to this degree of excellence.

The origins of Oberlin College lay in the small evangelical community of Oberlin, Ohio, founded in 1833 (Waite, 2001). Due to the community’s initial desire to create a godly community, they took a strikingly different stance than most White towns towards educating Blacks. John Shepherd, one of the founding ministers, held that Blacks should be educated “to elevate them more rapidly,” and for “the emancipation and salvation of our colored brethren.” Shepherd further suggested that by admitting Black students to the new college, “God will bless us in doing right.” Due to this founding philosophy, students attending Oberlin prior to the twentieth century intermingled in studies regardless of race; the only prohibition regarding race was the banning of dating and marrying between Blacks and Whites (Waite, 2001). In addition to admitting Black men, Oberlin also educated Black women; in fact, the first Black woman, Mary Jane Patterson, to receive an A.B. degree did so at Oberlin (Waite, 2001). Patterson would later become the principal of the first Black high school in Washington, D.C.

Oberlin College’s revolutionary admissions policy had far-reaching impacts on the education of African Americans throughout the country, North and South alike, especially because 70 percent of its graduates worked in the field of education after graduation (Anderson, 1988; Waite, 2001). Henry Cowles, a professor at Oberlin, reported that “between 1835 and 1863, 135 African American males and 141 African American females attended the College and that all were in the preparatory department.” Notable graduates of Oberlin College during this time period included William Sanders Scarborough, Dr. Anna Julia Cooper,

and Mary Church-Terrell, respectively, the first African American classical scholar of Greek and Latin, the second principal of M Street High School in Washington, D.C., and the first Black woman to serve on a school board. The accomplishments of the graduates of Oberlin College highlight a crucial period in African American and American history that would also produce the likes of Texas's William H. Holland.

After completing two years of studies at Oberlin College, William H. Holland, for reasons that remain unknown, moved back to Texas and, soon thereafter, began his political career (1870s: William H. Holland, n.d.; Lucko, 2010; Tobak, 2006). In his first years back in his native state, Holland served as a teacher in schools around the Austin Doublehorn community and then as the postmaster in Waller County (1870s: William H. Holland, n.d.; Lucko, 2010). In 1876, after joining the Republican Party along with many other African American men of the time, Holland was elected to the fifteenth Texas legislature, representing Waller County (1870s: William H. Holland, n.d.; Lucko, 2010; Pitre, 1985; Tobak, 2006). Notably, Holland was also elected as a delegate for the National Republican Convention in 1876 and 1880.

Upon entering the Texas legislature in August of 1876, Holland soon evidenced an Oberlin-style commitment to expanding educational opportunities for Black Texans. He supported a bill that aimed to create the Agricultural and Mechanical College of Texas for Colored Youth as part of the Morrill Act (1870s: William H. Holland, n.d.; Holland, William M., n.d.; Tobak, 2006). Under the 1862 act, states could develop land-grant universities in order to produce graduates with agricultural, mechanical, and technical skills to expand the industrial demands of the United States. With segregated schooling practices continuing to expand throughout the country, African American students were not able to receive the benefits from these federal- and state-funded institutions. (Anderson, 1988). As a result, Holland called on the Texas legislature to make appropriations for constructing a similar institution for African Americans in Texas. Upon the passing of the second Morrill Act of 1890, the later-named Prairie View Agricultural and Mechanical University was established along with sixteen other Black land-grant universities nationwide (1870s: William H. Holland, n.d.; Du Bois, 1903/2018). Because of his fight for equal educational rights for African American Texans, Holland is known as “the father of Prairie View A&M University” (1870s: William H. Holland, n.d.; Tobak, 2006). In addition to his political activism, Holland initiated a charity, Friends in Need, which provided financial support to African American students who wished to attend college (1870s: William H. Holland, n.d.; Tobak, 2006).

Seeing the gap in education for African Americans with disabilities in Texas, later in his legislative career, Holland lobbied for funding to implement a school for the deaf and blind African American youth of Texas. Although legislation had been passed in 1856 that mandated the establishment of separate schools for the deaf and blind White youth of Texas, no similar facilities existed for African American deaf and blind youths (Tobak, 2006). In April of 1887, six months after his initial proposal, the legislature granted a \$50,000 fund for the establishment and founding of the Institute for Deaf, Dumb and Blind Colored Youth (1870s: William H. Holland, n.d.; Corcoran, 2012; Crouch & Madaras, 2007). Holland was named its first superintendent; he would serve in this capacity for the Institute's first ten years of existence, and again in 1904 (Corcoran, 2012; Holland, William H., n.d.; Tobak, 2006). Despite having no previous experience working with those with disabilities, superintendent's reports filed by Holland reflect a man who was committed to not only serving this population, but also providing these students with the skills necessary to be self-sufficient (Tobak, 2006). He served on-and-off as superintendent until his death on May 27, 1907, when he died of a heart attack in his home in Mineral Wells. He was survived by his wife Eliza and two daughters (1870s: William H. Holland, n.d.).

The Beginnings of the Institute for Deaf, Dumb and Blind Colored Youth 1887-1897

The large influx of African Americans participating politically, affiliated with the Republican Party, allowed for the election of African Americans as legislators (Crouch & Madaras, 2007; Pitre, 1985). This would ultimately lead to William H. Holland's election in 1876 and 1880. When compared with other African Americans elected to the Texas legislature in the Reconstruction decades, William H. Holland stands out from his counterparts. In her research on the African American men who served during the time, Pitre (1985) says that they "did not differ markedly from most of those they sought to lead." The average lawmaker had been born a slave, was dark complected, and was the son of an "uprooted slave immigrant." During the Civil War he was "probably a runaway rather than a soldier." Of the forty-one Blacks whom she identifies as serving in the legislature in the latter third of the nineteenth century, "one had completed college, six had either attended or finished a normal school, three had managed elementary grades, twenty-seven had a "rudimentary education," and only four had never received some form of schooling. Emerging from the lower middle class, these legislators tended to be wealthier and more skilled "than the overwhelming majority of freedmen." In addition, only two of those African Americans who served in the legislature during the entirety of the Reconstruction Era had experienced freedom prior to the Civil War, one being William H. Holland (Crouch & Madaras, 2007).

As Holland was educated at Albany Enterprise Academy as well as Oberlin College, had fought in the Civil War, and had as parents both an enslaved woman known only as Matilda and a distinguished former secretary of state, arguments could be made that he may have been well equipped to understand the importance of education for African Americans during this period (Pitre, 1985; Randolph, 2002; Smallwood, 1981). This would be evident in his fight for the equal implementation of the Morrill Act, and his latter fight for state funding to create a facility aimed at educating a population of Black children who had not previously been properly or adequately accommodated in the past (Crouch & Madaras, 2007; Institute, 1888; Pitre, 1985; Stuart, 1992; Tobak, 2006). Holland's distinctiveness is further highlighted in the book *Significant Gestures* (Tobak, 2006).

From its beginning, the Institute was different from the American schools for the Deaf described in previous chapters of this book. The initial motivation for founding the Hartford school and the Clarke school, for example, was to address the educational needs of the founders' children. In the case of the Hartford school, Mason Cogswell sought to establish a school where his daughter Alice could be educated. In the case of the Clarke School, the Hubbards decided to found the first oral school in North America for their daughter, Mabel. Gardiner Greene Hubbard, Mabel's father, even served as the first principal. By contrast, the Institute for the Deaf and Dumb and Blind Colored Youth grew out of the work of William H. Holland (1841-1907), a humanitarian whose motivations seem to have arisen out of a general concern for the welfare of the children of Texas.

Holland's fierce dedication to the school's broad mission was denoted in his first Superintendent Report, (Institute, 1888) covering the 1887-1888 school year. In this report, Holland describes how he utilized African American newspapers of the time, as well as traveling to counties in Texas with large Black populations, in order to inform these communities of the existence of the school and to recruit students for its first academic year. Holland writes that, "by different methods [he] succeeded in advertising the existence of this institution, and making known to the people the great benefits which could result from it." By the spring of 1888, the enrollment of the school reached thirty-one, of which twenty-four were deaf and eight were blind.

In addition to detailing the means in which he doggedly pursued informing the African American

community of the Institute's existence, he also very clearly outlined his vision for the Institution. The initial indications of Holland's vision are in the name of the school. By deeming the school an institute as opposed to an asylum, Holland suggested that the admittance of the students into the Institute was for the advancement of their education. Moreover, the designation of the youth as "students" and "pupils" as opposed to "inmates," a term by which they would be referred to later in the Institute's history, implied that Holland's ultimate goal for each attendee was to afford them with the opportunity to graduate with both educational, social, and "industrial" skills that would allow them to be self-sufficient members of the community (Burch & Joyner, 2007; Carlson, 2001; Stuart, 1992; Tobak, 2006; Washington, 2008). At the end of his 1887-1888 report, Holland included a "General Information" section in which he further demonstrates his unprecedented philosophy for this underserved population. In her 2017 book *No Right to Be Idle*, Rose describes the increasingly negative societal views of many people with disabilities saying "by the 1880s and 1890s...only rarely did pupils [at idiot asylums]—or, as they were referred to more commonly, 'inmates'—return[ed] to live withw their families at home. Instead, asylum directors presided over perpetually expanding institutions that focused on supplying permanent custodial care of the 'feeble-minded'" (Rose, 2017). In the "General Information" section, Holland states that the education provided by the Institute constituted something to which these deaf, dumb, and blind youth were "entitled" to as opposed to something that the state benevolently provided for them. Similar philosophies towards the entitlement of accommodations for African American youth emerged in the late 1940s and early 1950s in Washington, D.C., when Black parents asked the courts to rule in favor of equal public schooling accommodations for their children with disabilities (Jowers-Barber, 2008).

Holland's view of the Institute's goals also bore a striking resemblance to the arguments made in favor of skilled vocational training by Booker T. Washington in his 1899 book, *The Future of the American Negro*. In his 1887-1888 superindendent's report, Holland argued: "There are, in Texas perhaps 450,000 colored people, yet there are not twenty-five professional tailors or dress makers among them." He continues to say that despite having such a large number of vocational workers, they have a limited "or occasional opportunity to learn more than the mere rudiments of their work." He concludes by expressing that "so it is also with blacksmiths, shoemakers, and the other labor among the trade" (1888). These trade limitations that Holland observed were indeed prevalent in the South, and in Texas, because many African Americans had been relegated to plantation and field work after their emancipation (Crouch & Madaras, 2007; Smallwood, 1981). He proceeded to note that "under these circumstances, it seems to me that the field for skilled labor among the colored people is virtually unoccupied, and offers the greatest inducements for the educated and trained experts in this line." This is significant due to the limited amount of power associated with being undereducated, even in regards to vocational or industrial skills; with a higher skill set, the opportunities of ownership and higher profits could have substantially benefited individuals and the African American community at large. Historian Tobak further reflects that "academically, there was nowhere else to go. Many colleges did not accept African American applicants, and the remainder made no accommodations for the Deaf" (2006). By equipping his pupils with skills, Holland was not indicating a predilection towards "industrial" work as Washington later would, but instead showed understanding of the limitations for African Americans with disabilities at the time and, furthermore, identifying the practical needs of the African American community in Texas.

Another distinguishing factor of Holland's Institute was his almost exclusive employment of African Americans as staff and instructors. In fact, the only non-Black staff members would be the physicians as, at that time, it was extremely rare for a state facility to employ an African American physician (Burch & Joyner, 2007; Tobak, 2006). During the first year, Holland was able to obtain two instructors for the

blind and deaf students, both of whom had previously taught at the North Carolina School for the Deaf and Blind: Julius Garrett and Cora L. Moore. The deaf students were educated using a combined method of oralism and sign language, and the blind students utilizes the New York point system (Institute, 1888; Tobak, 2006). Arising out of the New York Institute for the Education of the Blind, the New York Point System had been developed by superintendent William Bell Wait. Wait initialized the system in 1872; similar to the American Braille system, it was comprised of two lines as opposed to the three lines of dots used in American Braille. In addition, the New York Point system was developed to assist with teaching blind pupils how to notate music. This would be advantageous as music would soon become an important addition to the Institute (Institute, 1888).

In the following year's report, Holland describes how the progress of building the main building and other structures, including sheds for stock, laundry rooms, three small cottages, bath rooms, and the barn, had been completed and were being utilized by the students. In regards to the self-sufficiency of the Institute, Holland explains that there were "two work horses and two mules, eleven head of Jersey cows and calves, twenty-eight head of hogs" and that "six of the cows and calves and all of the hogs were raised on the place." The hay produced by the land was "sufficient to feed the stock" and "the garden has supplied the table with most of the vegetables used." In addition to the garden, he noted that "one hundred and sixty well selected peach trees and twenty plum trees" had been planted. Although Holland is clear to detail the Institute's ability to utilize the land to reduce expenditures for feeding the staff and students, he never implies that the farm or garden is a means for the students to make payment to the school for the instruction, room and board, medical treatment or any other expenses. This is quite divergent from idiot asylums of the time, which often utilized inmate labor to produce goods and which did not concentrated on their education. (Rose, 2017; Tobak, 2006)

Unsurprisingly given the sparse educational offerings for African American children with disabilities at this time, the Institute grew rapidly. The number of deaf students increased from twenty-four in spring of 1888 to sixty in the spring of 1889, while the ranks of blind students expanded from eight to twenty-five during the same time period. Students ranged in age from seven to twenty-four. Considering the lack of availability of education for African American deaf and blind children in Texas prior to the development of the Institute, it is not surprising that older students were admitted into the facility. In response to this absence of educational opportunities, and more so the lack of vocational training necessary to establish a livelihood upon adulthood, Holland describes many types of training already available, along with others that he planned to implement when adequate funding was made available. These training programs included a "shoe making shop with enough tools for nine," "vocal and instrumental training and crochet work" for the blind students, "broom making" for the blind boys, "bottoming chairs," "mattress making" and "general homemaking and sewing" for the girls. Yet, Holland also noted that these training programs were in addition to students' schoolwork, rather than the reverse (Institute, 1888).

The Institution was initially funded with a \$50,000 appropriation by the state's twentieth legislature. Holland concludes his first report (Institute, 1888) by describing the most recent support of the state and its implications: "the appropriation of \$33,000 by the last Legislature for its maintenance of two years demonstrates to the whole people that Texas is able and willing to educate and is educating every child within her borders who is willing to accept her generous offer." Analysis of Holland's records shows that he was meticulous in dictating each expense, no matter how minor, including the pay of himself and all other staff and instructors. With the total expenditures for the 1888-1889 school year amounting to \$21,026.42 and the total expenditures for the initial startup cost for the 1887-1888 school year totaling \$31,038.42, the Institute seemed to be in somewhat sound financial standing and to possess the capacity

to serve even more children. It can be inferred from the 1892 report that sufficient space for the enlarging population of students was more likely to become problematic in the future than the ability to adequately care and educate these students.

As the years passed, the Institute's board of trustees continued to address Holland in a polite and dignified manner, being in agreement with him in most cases. However, the passion that Holland demonstrated in his reports does not seem to be in complete accord with the trustees. In Holland's final report of 1897, the incongruence between Holland's vision and the board's became evident. In this report, Holland once again argued that the Institute badly needed a new structure, as the existing building was experiencing severe issues with its foundation. He stated that "old, dilapidated, and unsightly" facilities should be "replaced" by a building with "modern conveniences." He then described the new structure and the amenities that it would possess. The board of trustees' report for the year described the dilapidated state of the building as an issue of which they were not aware, despite Holland's previous complaints. Intriguingly, this report was the first one to use term "asylum" by the board of trustees, in contradiction to Holland's consistent rejection of the term. While the precise details of these disputes remain unclear, the board of trustees relieved Holland of his duties as superintendent in February 1897. He was replaced by S. J. Jenkins, who had no previous experience in education or with working with people with disabilities. As Holland's tenure as superintendent came to an end, so too did the implementation of his unique views about the capabilities of African American youth with disabilities (Institute, 1897).

A Change in Culture: From an Institution to an Asylum

In Superintendent Jenkins' first report (Institute, 1897), addressing the exchange of "reins" from Holland to himself, the Institution's change of culture is immediately apparent. Jenkins claims that there was "no friction" and says that Holland did everything to "ensure my success" as he "relinquished" his duties. Holland's eagerness to make this transition as painless as possible for the students is evident in the fact that the entirety of the report was formulated by Holland, other than Jenkins' brief one-page contribution. Jenkins describes his hiring of Miss Ella B. Wilder, a recent graduate of the Institution under Holland, as a teacher in the "mute" department upon the discharge of Holland's wife, E. J. Holland. Jenkins concludes by describing the firing of almost the entire staff employed under Holland's tenure "to ensure the efficiency of the service of the Institute," then detailing their replacements (Institute, 1897). Holland's views on disability, race, and education may have been adopted by the staff, and surely shared by his wife; the dismissal of the entire staff by Jenkins gives reason to presume that he wanted no objections to his own views.

The tides of change are further evident in Jenkins' 1900 annual report; the first line of his address to the Governor presages the changes to come. Jenkins declares, "I have the honor to hand you the thirteenth annual report of the Texas Deaf, Dumb and Blind Asylum for Colored Youth." It is with these opening words that we see how Jenkins viewed the Institute and the youth who were enrolled. Any notion that Jenkins may have had an inchoate understanding of the implications of the name change is eradicated in the "general information" section of the report. Taking a cue from Holland, which as previously mentioned always noted in the general information that the school was not an asylum, Jenkins' first point in this section reads "this is a state ASYLUM." With the first mention of the school as an asylum coming from the board of trustees in the 1897 report, Jenkins may have acquiesced under pressure in the hope of retaining his position as superintendent. Whether it was his intention to outright replace Holland's formulation of the Institute, Jenkins emphatically declared that the direction would henceforth be changed.

Furthermore, throughout the remainder of the report, Jenkins made subtle comments that suggest

his pejorative views of those with disabilities—views that gradually began to change the structure of the Institute itself and its educational programs. When describing the commencement speech given by Dr. A. B. Jackson at the graduation ceremony that took place on June 4, 1900, Jenkins recalls how Dr. Jackson “forcibly reminded them of the great blessings received from the State by its unfortunate youth.” When describing the part that the music program had played in the lives of the blind students, Jenkins expresses that “their enjoyment of music is the one ray of sunshine in their darkened lives.” The language used by Jenkins was indicative of the growing view of the time of people with many types of disabilities as feeble and unable to perform “self-care,” and served to further perpetuate these views (Rose, 2017).

In regards to Holland’s commitment to placing education at the forefront of the Institute’s work, no flagrant changes seem to have been made. The language used by Jenkins when describing previous implementations such as the literary clubs or course of instruction for the blind and deaf seem a little grandiloquent, but those programs had the exact same structure as when Holland was superintendent. In his description of the music program, Jenkins refers to the blind being “proverbial lovers of music” and, while making a blanket statement about the blind, says “all intensely love listening to good music.” He altered the goals of the Institute’s industrial training program, though. Instead of utilizing these programs to enable the students to become self-reliant in adulthood as well as producing a skilled workforce that could contribute to the African American community in Texas, Jenkins describes them as being advantageous to the school as the means of reducing overhead and possibly becoming a source of supplemental revenue. Holland had never highlighted corn and hay as sources of revenue, but Jenkins proclaimed that “one hundred and fifty bushels of corn and an abundance of hay” was yielded from the land. The production of goods is not surprising, as many asylums of the time utilized those they were to serve as sources of free labor and a means of compensating for inadequate state funding (Institute, 1900; Rose, 2017).

Jenkins’ tenure as superintendent came to an end for unknown reasons in 1904 after seven full school years. At that time, Holland would once again be called upon to supervise and oversee the Institute, however, the changes in culture implemented during his absence had become an integral part of the fabric of the school; later reports retain the use of the term “asylum.” As no reports are available for the latter years of Holland’s service, there is no way to definitely know if he attempted to reorient the asylum as an educational institute. Nevertheless, the term was carried into the next administration, beginning after Holland’s death in the summer of 1907, after which H. S. Thompson was appointed superintendent.

In the 1909-1910 report filed by Thompson (Institute, 1910), the opening page discloses that the then-current serving staff at the Institute. E. J. Holland, who had been previously fired and replaced under the Jenkins tenure, was named as the principal teacher. As such, she was in charge of the bulk of the educational administration of the Institute. Assuming that E. J. Holland returned during the last three years of her husband’s time as superintendent, she would have had to make the commitment to not only return but also assume a higher level of responsibility within the Institute. This is quite a turning point in the history of the Institute, as it is the first time that a woman had been placed in a role other than teacher, matron, laundress, or cook (Institute, 1889; Institute, 1900; Institute, 1892; Institute, 1894; Institute, 1897).

According to the 1910 and 1912 reports from Thompson’s tenure as superintendent, both Jenkins’ and Holland’s approaches to educating children with disabilities seem to have remained in practice, but with greater emphasis on the latter’s ideology, possibly due to the influence of the board of trustees. As far as the education and industrial training programs are concerned, the initial structure delegated by Holland remained unchanged and, in fact, Thompson gave an extremely detailed account of the course work for the blind and deaf pupils for each year of study. Covering year one through year eight, the course work

included geometry, reading skills, writing skills, arithmetic, philosophy, and the combined method for the deaf and New York Point System for the blind. Thompson described the music and industrial departments in detail as well. All of the industrial training concepts spoken of by Holland in his initial report had been fully developed; training offerings included shoe making, broom making, sewing, homemaking, and mattress making. The continuation and further development of Holland's original educational blueprint might well be associated with E. J. Holland serving as principal teacher. Despite the apparent realization of Holland's vision for the educational aspirations of the youth, Thompson continued to refer to the school as an asylum.

Conclusion and Future Research

Probing the history of the Institute for Deaf, Dumb and Blind Colored Youth of Texas yields an in-depth analysis of the implications of the usage of the term asylum. With an origin meaning "a place of refuge," the definition in modern times has come to include a place offering shelter and support to people who are mentally ill. The term "asylum" implies that people who are admitted have some sort of mental deficiency and are, therefore, unable to care for themselves. William H. Holland, being cognizant of the barriers that race already imposed, purposely rejected the use of this term when referring to the Institute. It is not known how he came to adopt these views, as he had no known direct connection with a person with a disability. Nevertheless, the conclusion can be drawn that his influence was of great importance to the Institute and those who attended.

Holland's reasons for initiating an "industrial" training curriculum indicate his knowledge of the use of such training programs in other schools for the disabled. One of these was Gallaudet University, which was preceded by the examples of Hartford and Perkins. In this, the lasting effects of his time spent at Albany Enterprise on his development as an educator are seen. This information is relevant for disability studies, because it indicates that, despite the social restrictions placed on people with disabilities, he understood that adequate training and accommodations can enable people with disabilities to thrive and live fully functional lives. Furthermore, this research supports the Social Model argument that it is in fact society and the restrictions that it places on people with disabilities place the most barriers on the lives of those with disabilities.

In order to further explore how the influence of William H. Holland, as well as race, played a part in the continued history of the Institute for Deaf, Dumb and Blind Colored Youth, this research will be expanded in the 2019-2020 academic year. This research will analyze the latter fifty years of the Institute, with considerations of the changing historical landscape in regards to both race and disability. Considerations will include the usage of African Americans for medical experimentation, increase in the incarcerated population, institutionalization, rise of the Jim Crow era, impact of the civil rights movements and its effects on race relations, growing disabilities rights, as well as both changing and residual views of those with disabilities. Comparisons between the funding of the Institute in comparison to White state facilities for people with disabilities, such as the state schools for the blind and for the deaf, will allow for the analysis of what separate but equal actually meant at this time. Furthermore, legislative discussions and the comparison of this Institute with other asylums in Southern states will add perspective. Pairing this research with oral narratives from those who attended the Institute will further allow for the critical analysis of how race and disability have resulted in not only a simultaneous oppression, but also a unique and individualized experience by each person directly affected by the collision and amalgamation of these two socially constructed forms of discrimination.

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FAMILY CAREGIVERS OF CHILDREN WITH SPECIAL HEALTHCARE NEEDS: PERCEPTIONS OF SOCIAL AND SERVICES SUPPORTS

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ABSTRACT

One in five U.S. families has children with special health care needs (CSHCN). Our study sought to learn the perceptions of primary caregivers of CSHCN regarding availability of social support and formal services to appropriately care for CSHCN. Methods Participants completed a 34-item, semi-structured survey adapted from National Health Interview Survey questions. The survey was available to all parents whose children participate in a Dallas program for children with physical disabilities. Survey items assessed caregiver perceptions about adequacy of formal and informal supports. Quantitative data were analyzed in Microsoft Excel using descriptive statistics. Qualitative responses were inductively coded for themes and sub-themes. Results Twenty participants completed the survey (response rate=57%). Of respondents, 55% ($n=11$) said they had challenges paying for their child's health needs, and 40% said that paying their child's health expenses "caused financial problems" for the family. Further, 45% ($n=9$) stated that they or a family member had "stopped working" due to their child's health. Qualitative response themes included desire for activity programs for CSHCN and lack of available respite care. Conclusion Caregivers of CSHCN face may face unaffordable health care costs, difficulties maintaining employment, lack of child/respite care, and lack of access to recreational activities for CSHCN.

“Children with special health care needs (CSHCN) are defined as individuals who have or are at increased risk for chronic physical, developmental, behavioral or emotional conditions and who also require health and related services of type or amount beyond that usually required by children” (Health Resources, 2018). One in five U.S. families has a child with a special health care need (Health Resources, 2018). The U.S. Health Resources and Services Administration’s Maternal and Child Health Bureau (HRSA MCH) reports that nearly 20% of U.S children under 18 years of age have a special health care need (SHCN; Health Resources, 2018)—a significant increase from 13% of children who reportedly had an SHCN in 2004 (Dyck, Kogan, McPherson, Weissman, & Newacheck, 2004). Of children who had an SHCN, the highest prevalence was in older children, boys, and/or non-Hispanic White and Black children (Dyck et al., 2004).

When caring for a child with an SHCN, many financial burdens emerge, particularly among low-income families. According to Fuller, Brown, Grado, Oyeku, and Gross (2019), the most prevalent material hardships among low-income families of CSHCN include difficulty paying bills (41%), food insecurity (34%), and health care hardship (12%). Past research has suggested that children with medical complexity (CMC) experience highly fragmented care with significant negative impacts on family well-being (Coller, et al., 2015).

The financial burden of raising CSHCN is presented in two distinct areas of research. One area of research focuses on the economic burden of CSHCN and the second centers on the challenge to maintaining full-time employment while raising CSHCN (Kuhlthau, Hill, Yucel, & Perrin, 2005; Looman, O’Conner-Von, Ferski, & Hildenbrand, 2009; Stabile & Allin, 2012;).

Findings from the first body of research show that families who have CSHCN experience a wide variety and range of both direct and indirect financial costs. Direct costs are defined as monetary costs such as expenditures on health care, therapeutic, behavioral, or educational services; transportation; caregivers; and other special needs services. The direct costs to the families vary with the type and severity of disabilities and the availability of health and social care benefits. Within studies from 1989 to 2005, the estimated annual direct costs associated with severe physical childhood disabilities (such as cerebral palsy and spina bifida) range from \$108 to \$8,742 (Park, Turnbull, & Turnbull, 2002; Stabile & Allin, 2012). Specifically for lower-income families, the estimated annual expenditure on medical care was lower, at about \$283 on average (Stabile & Allin, 2012). The odds of having financial problems for respondents in “near-poor” households (100% to 199% of the federal poverty guidelines) were 5.2 times higher than respondents in households at or above 200% of the federal poverty guidelines (Looman, O’Conner-Von, Ferski, & Hildenbrand, 2009). These studies find a higher direct cost for families that have CSHCN as opposed to families that do not.

The second body of research includes reports that full-time employment was less likely among parents of disabled and CSHCN. Due to the severity of the condition of the child, there was an increased likelihood that the parents would reduce or stop working in order to care for their child (Derigne, 2012). The employment sacrificed by one or both parents can be detrimental to the financial stability of the households of lower-income families. Indirect costs are defined as reductions in parents’ ability to sustain paid employment. A study found evidence of a relationship between childhood disability and maternal employment. Mothers of children with disabilities are 3 to 11 percentage points less likely to work, and the effect is larger (13 to 15 percentage points) if the child is severely disabled (Stabile & Allin, 2012). Consequently, studies have modeled the likelihood of a father being employed one year after the birth of a child in poor health and found that the fathers were 4 percentage points less likely to be employed one year later (Stabile & Allin, 2012). Fathers were less likely than mothers to alter their employment status

due to a child who is in poor health.

In the research literature, studies show that other areas of burdens that families of CSHCN face involve the health of the family, the functioning of the family, and care burden. The children themselves can range from having chronic conditions such as seizure disorders, asthma, autism, cerebral palsy, and Down syndrome (Caicedo, 2014). Due to the range of the medical conditions, most of the children will need to use more than one medical technology device, such as tracheotomy, ventilator, oxygen, pulse oximetry, suction machine, feeding pump, and compression vest for chest physiotherapy. From the reality of the child's diagnosis of a chronic condition to the use of a medical technology device, parents reported worrying about many aspects of care for their child. Worry manifested in concerns about the child's future, side effects of medications/treatments, the efficacy of medical treatments, others' reactions to the child's condition, and how the child's condition was impacting other family members (Caicedo, 2014).

Previous research findings suggest there are many challenges faced by families of CSHC, in addition to the financial and medical challenges, in accessing health care and services (Chen & Newacheck, 2006; Davidoff, 2004; Fuller et al., 2019). Insurance coverage was related to the socioeconomic and demographic characteristics of children and their parents. Insurance coverage can be linked in many cases to the primary caregiver's employment status. In addition to both of these factors, having a child with cerebral palsy showed an increased significant difference compared to households who had a child with a different special health care need. Schaible et al. (2018) found the odds of being insured for an entire year for a child diagnosed with cerebral palsy were 1.82 times that of other CSHCN. Newacheck (2004) examined demographics and included older children, Hispanics, children from poor and near-poor households, those in families where the household head was not highly educated; each identifying characteristic increased the likelihood of uninsurance by four times among families with a child with a SHCN. Families of CSHCN who are experiencing poverty have limited access to health care. Poverty affects all family members' health because of the family's inability to afford health services from doctors, dentists, or psychologist or health supplies, such as prescription drugs or first aid materials. Even with Medicaid, many doctors refuse Medicaid patients because of low reimbursement rates from the government; and many poor families have difficulty paying small fees for covered services (Park, Turnbull, & Turnbull, 2002).

In addition to the financial burden families who have CSHCN face, another burden that is expressed within the literature is the additional amount of time that is required to care for CSHCN. In one study, researchers explored the amount of time spent for all daily activities for both mothers and fathers who had a child with profound intellectual and multiple disabilities (PIMD; Luijkx, van der Putten, & Vlaskamp, 2017). They found that both parents spend on average 2.1 to 2.8 hours per day on care and supervision of their child(ren) as their primary activity, as compared with parents of typically developing children, who spend on average less than 20 minutes per day on child care and supervision. Parents of children with PIMD not only spend more time for care on their children, but also have a decreased amount of free time doing activities other than caring for their child. Parents of children with PIMD spent on average 1.5 hours less per day on free activities than parents who have children that are developing typically (Luijkx, van der Putten, & Vlaskamp, 2017).

While the challenges of family caregivers with CSHCN are well-described in the literature, a paucity of literature exists to describe informal and formal supports for family caregivers with CSHCN. We propose research to address this gap in the literature and investigate a vital factor that impacts the well-being of CSHCN. For our purposes, "supports" to families with CSHCN will be defined as including having informal (e.g., family members, peers) and/or formal (e.g., government organizational programs, non-governmental organizations) supports who provide the family caregivers of CSHCN with practical assistance and/or emotional stability.

Methods

The study population was comprised of a convenience sample of parents of CSHCN who participate in a recreational wheelchair basketball program in Dallas, Texas. The children involved in this recreational wheelchair basketball program were aged 5 to 18 years. Not all children in the program use wheelchairs, but all have a SHCN. Study participants met the inclusion criteria to qualify for the study. All participants were the primary caregivers of children with SHCN, at least 18 years of age, and able to speak or read English or Spanish as their preferred language. Further, all study participants were provided with informed consent prior to participating in the study.

Surveys were administered to participants to identify informal and formal network supports used by participants, as well as assess the perceived benefit and need for these supports. The survey was created by the research team by adapting questions from the interview within the National Health Interview Survey (NHIS). A total of 20 caregivers, representing 20 unique households, participated in the study. Data were collected via online survey by an anonymous link sent to all parents of children who participate in a local adaptive sports program for CSHCN, and by hard copy surveys available for in-person completion at a day camp for children in the program.

The survey was titled, "Survey of Caregivers of Children with Special Health Care Needs." The 34-item, semi-structured survey instrument was comprised of demographic, closed-ended, Likert scale response items, and three open-ended questions. The survey consisted of four sections that assessed perceptions of informal and formal supports.

The first section contained questions about the participants' CSHCN. Several questions ascertained the child's health condition and its severity to understand to what extent caregivers perceived need and adequacy of supports. This section assessed three dimensions of the child(ren): the condition(s) of the child(ren) (What health conditions affect your child?); severity of the condition (How would you rate the severity of your child(ren)'s health condition, and days of school missed due to health condition (In the past 12 months, how many days did your child miss school because of health problems?).

The second section contained questions about the participant (i.e., the parent or caregiver of the child(ren) with SHCN) specifically. This section measured two distinct dimensions. The first dimension was the overall impact on the caregiver and family as a whole. Impact was separated into three aspects: the cost of child's health care, financial hardship on household, and caregivers' employment challenges faced due to having a child with a SHCN. Four-item-response Likert scale (strongly agree, agree, disagree, strongly disagree) questions included the following:

I have had difficulties or delays getting what I need for my child because the services I need for my child were not available due to cost.

Paying for expenses related to my child's health condition has caused financial problems for my family.

Examples of Yes/No questions included:

Have you or other family members stopped working because of your child's health condition?

Have you or other family members cut down on the hours worked because of your child's health condition?

Have you or other family members avoided changing jobs because of concerns about maintaining health insurance?

The second section measured the amount of social and service support the families felt they received using a four-item-response Likert scale (strongly agree, agree, disagree, strongly disagree). Examples of questions included:

It is difficult to gain support from others about my child's condition.

I am often frustrated trying to get services for my child.

During the last 12 months, how often did you get as much help as you wanted with arranging or coordinating your child's care?

The third section of the survey addressed the demographics of the study participants. This section of the survey provided understanding of basic demographic questions, as well as information about health insurance and health care utilization.

The final section was comprised of three open-ended questions about the perceived impacts, services, and needs reported by caregivers of CSHCN. Questions included:

Please describe AT LEAST ONE way that having a special need child/children has impacted you and/or your other children.

What have been the top two most important services that you use to help you care for your child?

Please describe at least one thing that you would like to have more help with when it comes to caring for your special needs child(ren)?

Data were entered into a Microsoft Excel database. Descriptive statistics calculated in Excel were used to report data from closed-ended questions, and qualitative coding was used to analyze responses to open-ended questions. Qualitative responses were analyzed for themes and sub-themes using an inductive process. A coding tree was created and data were coded for frequency of response.

Results

Among those invited to participate in the survey, 25 initiated taking the survey. Five participants initiated the survey, but did not complete any survey questions. Twenty participants completed all survey questions. The participants who completed all or the majority of the survey questions ($n=20$) are the sample on which data analysis was performed. Results presented in Table 1 show the socio-demographic characteristics of participants. Of survey participants ($n=20$), 65% ($n=13$) reported their race/ethnicity as White/Caucasian, 20% ($n=4$) reported their race/ethnicity as Black/African American, 10% ($n=2$) said that they were of Hispanic/Latino ethnicity, and 5% ($n=1$) reported their ethnicity as Asian. All participants reported English as their preferred language ($n=20$; 100%). Four-fifths ($n=16$; 80%) of participants reported annual household income as "more than \$40,000." Among participants, 5% ($n=1$) of caregivers reported their overall physical health as "poor," 10% ($n=2$) reported their overall physical health as "fair", 75% ($n=15$) reported their physical health as "good," and 10% ($n=2$) reported their health as "excellent." Participants also self-reported their mental and emotional health, including 35% ($n=7$) of participants

reportedly in “fair” health, 60% ($n=12$) reportedly in “good” health, and 5% ($n=1$) of participants reportedly in “excellent” health.

Table 1: Demographics of caregiver participants who have CSHCN.

Language	N=20	%
English	20	100
Spanish	0	0
Vietnamese	0	0
Other	0	0
Race/ethnicity		
White/Caucasian	13	65
Black/African American	4	20
Hispanic/Latino	2	10
Asian	1	5
Other	0	0
Gross annual income		
Less than \$20,000	1	5
\$20,000-\$25,000	0	0
\$25,001-\$30,000	0	0
\$30,001-\$35,000	1	5
\$35,001-\$40,000	2	10
More than \$40,000	16	80
Rating physical health of parent		
Poor	1	5
Fair	2	10
Good	15	75
Excellent	2	10
Rating mental/emotional health of parent		
Poor	0	0
Fair	7	35
Good	12	60
Excellent	1	5

Participants also reported the health conditions affecting their children with special health care needs. Table 2 presents the most prevalent health conditions that participants reported affecting their children, including “spina bifida” ($n=11$; 26.83%), “bone, joint, or muscle problems” ($n=8$; 19.51%), and “other” ($n=4$; 9.76%).

Table 2: The prevalence of the child's health condition(s) for the participants who have a CSHCN.

Child's health condition(s)	N=41	%
ADD/ADHD	2	4.88
Amputation(s)	1	2.44
Anxiety	3	7.32
Autism, Asperger's, ASD	1	2.44
Brain injury	0	0
Bone, joint, or muscle problems	8	19.51
Cerebral palsy	2	4.88
Congenital spinal deformity	2	4.88
Depression	0	0
Development delay	2	4.88
Down's syndrome	0	0
Epilepsy	0	0
Hearing problems	0	0
Learning disability	2	4.88
Speech problems	1	2.44
Spina bifida	11	26.83
Spinal cord injury	1	2.44
Tourette's syndrome	0	0
Vision problems	1	2.44
Other	4	9.76

The survey asked participants about perceived support in caring for their child(ren) with SHCN (Table 3). Nearly 45% ($n=9$) of participants stated they “strongly agreed” or “agreed” that they found it difficult to gain support from others about their child’s condition. Of all the participants who completed the survey 55% ($n=11$) stated they have had difficulties or delays getting services they needed for their CSHCN due to cost. Twenty percent ($n=8$) reported difficulties or delays getting what was needed for their CSHCN due to the services not being available in the area in which they were located. Sixty-five percent of caregivers ($n=13$) also stated they were often frustrated trying to get services for their CSHCN.

Survey questions about the economic consequences of having a CSHCN revealed caregivers’ perceptions (Table 4). Nearly half ($n=9$; 45%) of participants stated that they or another family member had stopped employment due to their child’s health condition. The majority of participants responded that they or another family member had decreased their hours of employment due to their child’s health condition ($n=13$; 65%), and half of the survey participants reported having avoided changing employment due to concerns about maintaining health insurance ($n=10$; 50%). Two fifths of respondents reported that paying for expenses related to his/her child’s health condition had caused financial problems within their family ($n=8$; 40%).

Table 3: Perceptions of supports/services received by families with CSHCN

Question/ Statement	Strongly agree	Agree	Disagree	Strongly disagree
It is difficult to gain support others about my child’s condition.	1 (5%)	8 (40%)	8 (40%)	3 (15%)
I have had difficulties or delays getting what I need for my child because the services I need for my child were not available in my area.	4 (20%)	4 (20%)	12 (60%)	0 (0%)
I have had difficulties or delays getting what I need for my child because the services I need for my child were not available due to cost.	2 (10%)	9 (45%)	8 (40%)	1 (5%)
Question/ Statement	Strongly agree	Agree	Disagree	Strongly disagree
I have had difficulties or delays in getting what I need for my child because I have trouble getting the information I need.	3 (15%)	7 (35%)	10 (50%)	0 (0%)
I am often frustrated trying to get services for my child.	5 (25%)	8 (40%)	6 (30%)	1 (5%)
I need extra help coordinating my child’s care..	2 (10%)	6 (30%)	11 (55%)	1 (5%)
Paying for expenses related to my child’s health condition has caused financial problems for my family.	4 (20%)	4 (20%)	12 (60%)	0 (0%)

Table 4: Caregiver perceptions of economic impact of caring for CSHCN

Question	Yes	No
Have you or other family members stopped working because of your child’s health condition?	9 (45%)	11 (55%)
Have you or other family members cut down on the hours worked because of your child’s health condition?	13 (65%)	7 (35%)
Have you or other family members avoided changing jobs because of concerns about maintaining health insurance?	10 (50%)	10 (50%)

Results presented in Table 5 show the recurring themes identified in open-ended item responses with regard to supports for caregivers of CSHCN. Three open-ended questions were included on the survey:

Please describe at least one way that having a special needs child/children has impacted you and/or your other children.

What have been the top two most important services that you use to help you care for your child?

Please describe at least one thing that you would like to have more help with when it comes to caring for your special needs child(ren)?

As reported in Table 5, the first and second themes to emerge from the responses of the participants were access to health care and specialized health services, and activities, respectively. Seven participants (35%) reported significant difficulties accessing health care, activities, and/or services for CSHCN. Four participants (20%) stated that the health conditions of their child(ren) limited daily traveling and routines of the family overall. One participant stated, “The places we choose to go and the things we do as family

are restricted because of special health care needs.” Services that the participants most reported as important to help care for their child(ren) were adapted extracurricular activities, community programs for kids with similar needs, school district special education programs, and others. Asked to describe one aspect with which participants would like to gain assistance in caring for their CSHCN, 40% (n=8) stated more accessibility to a selection of services, including activities, medical equipment, clothing, tools to increase independence, physical therapy at home, sports chairs, and medical specialists.

The third theme to emerge from the open-ended response data was awareness of programs and services participants’ children (Table 5). One quarter of participants (n=5) reported having a desire for awareness of programs and services for their child(ren). When participants were asked to identify an aspect they would like to gain more assistance with in caring for their CSHCN, one participant stated, “Help with knowing what services and options are available to us.” Two participants stated specifically that the lack of understanding from school administrators and other family members about their child(ren)’s health condition impacted them significantly.

The need for respite care was the fourth overarching theme that emerged from the data. One quarter of participants of CSHCN (n=5) stressed the importance and need for qualified child care for their CSHCN in order for caregivers to receive consistent respite care for their CSHCN. One participant stated, “It’s very hard to get childcare. He’s complicated.” Of the support services that caregivers felt were the most important and useful in caring for their CSHCN, respite care was perceived by the families as having significant benefit.

Table 5: Overall themes identified regarding supports for caregivers with a CSHCN.

Theme	Definition	Quotes
Access to health care and specialized health services	Any statement related to the level of ease in which the parent/caregiver to a CSHCN can obtain needed medical services (e.g., hospital/specialized services, physical therapy, medical equipment) for their child.	“(We would like) Access to medical equipment or specialists w/o constraints imposed on us by insurance companies.”
Access to activities	Any statement related to the level of ease in which the parent/caregiver to a CSHCN can involve their child in activities (e.g., physical/recreational activity programs, school programs, community programs).	“Physical access to schools and recreation sites. Barriers to wheelchairs...He missed so much because of barriers to access. This remains a huge nationwide problem.”
Awareness of programs and services	Any statement related to parent/caregiver knowledge of programs or services for their CSHCN.	“Made more aware of laws and services for those with special needs. Also more aware of struggles of those with special needs.”
Child care/respite care	Any statement related to respite care which provides short-term relief for caregivers of CSHCN.	“Help with her in school and at home care to lighten the load for me.”

Conclusion

The purpose of this study was to examine the formal and informal supports for family caregivers of CSHCN. Our results confirm existing research, showing the prominence of health care costs can affect families from all income levels, and not only low income families (Derigne, 2012; Kish, Newcombe, & Haslam, 2018). In addition, our research agrees with existing literature concerning the financial impact on the family resulting from caring for a CSHCN. Our results indicated a negative effect for families of

CSHCN on the employment status of the primary caregiver or another family member with regard to the cessation of employment, decreased amount of hours worked, and/or avoiding changing employment because of concerns about health insurance coverage. The effects of these factors can have significant consequences for the financial stability of the family and caregivers' ability to provide care for their CSHCN (Derigne, 2012; Stabile & Allin, 2012).

In addition to our confirmatory results, our findings concerning lack of access to recreational activities for CSHCN and caregiver respite adds to the existing research. Our findings show that the lack of access to physical/recreational activities for social integration of these children can cause significant frustration among the family caregivers of CSHCN. Caregivers perceived increased difficulty in finding activities and accessing services for their CSHCN. Survey results clearly showed caregivers' shared desire for accessible activities and services for their CSHCN. Our findings also indicate a frustration among family caregivers of CSHCN in finding child care providers capable of caring for their child's SHCN. Caregivers conveyed that without such care, they cannot receive any occasional respite from their caregiver responsibilities.

A number of limitations of this study should be noted. This study was based on a small sample size and did not provide statistical associations. All data were self-reported by caregivers and are not substantiated by collection of objective data. Another limitation to this study is that the convenience sample was not representative of the larger population of all caregivers of CSHCN. Study participants represented only families of children with physical disabilities; families of children with mental or intellectual disabilities were not represented. Caregivers who do not have the resources to allow their children to participate in sports programs for CSHCN were also not represented in the sample. Therefore, the sample population was composed of a limited segment of the greater population of CSHCN.

Our analysis suggests that caregivers have an exceedingly complex role in navigating care and activities for their CSHCN and that financial costs associated with caring for CSHCN strain even families living above the poverty line. In addition, findings suggest that caring for a CSHCN places pressure that impacts the whole family. Finally, we found that child care for CSHCN is a desired support among caregivers to CSHCN. Further studies should be conducted to learn the associations among other demographic factors (e.g., education attainment, marital status) and supports, such as awareness of and accessibility to recreational activities and health care services, provided to both caregivers and CSHCN.

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RACIAL DEMOGRAPHICS AND ABOLITIONISM IN NINETEENTH-CENTURY PUERTO RICO

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ABSTRACT

Although it is now part of the United States, Puerto Rico existed under Spanish rule for over 400 years and experienced slavery for approximately 360 of them. Puerto Rico's journey toward abolition in the nineteenth century, ending with emancipation in 1873, was unique because it was shaped by a combination of internal and external factors: geography, the island's racial and ethnic demographics, and Spain's dynamic liberal economic policy toward the colony. This work utilizes maps to provide both historical context and visual explanations for how geography and topography shaped Puerto Rico's racial demographics and thus its slave labor force. Map analyses show that slavery was concentrated in the coastal plains, leaving the difficult livelihoods of enslaved blacks and *libertos* (freed slaves) open for observation by the more privileged classes of Puerto Rican society. This work examines nineteenth century abolitionists' writings to identify a unique quality of abolitionism in Puerto Rico: that the movement began primarily among the island's class of educated elites and included a wide variety of arguments in favor of abolition. Few academic historians in the United States publish on slavery and abolition in Puerto Rico, leaving ample room for future historical works, maps, and digital humanities projects.

CHAPTER 1

Introduction

1.1 Puerto Rico as a Topic of Study

Puerto Rico is one of the least studied island societies of the Caribbean Greater Antilles island chain. This is evident in the number of historical monographs published and the availability and quality of other resources pertinent to the island's history. Few historical books focus on Puerto Rico during the age of slavery and abolition. According to WorldCat, academic historians in the United States have published only two such works since 2000, one of which was a valuable source of population and demographic data for this paper.¹ In comparison, there are over fifteen history books on the same themes published about Cuba. Only ten books in total have been published about Puerto Rican slavery and abolition, while over fifty have been published in the United States about Cuba. For the most part, these works are written in English and published in the United States and a few western European countries.

There are also fewer primary sources available on Puerto Rico outside of books and correspondence of the period. For example, a search for “principal place of slave landing” on the Trans-Atlantic Slave Database, a comprehensive digital humanities project, reveals 87 voyage results for Puerto Rico while Cuba has 2,470 slave voyage entries. Approximately 60% to 65% of Cuba's entries have data on the number of enslaved Africans brought to port, but only 35% of Puerto Rico's significantly fewer entries have similar information. Whether due to a lack of archival research or a genuine absence of surviving records, historians have given little attention to the subject of Puerto Rico under Spanish colonial rule. Most academic works that describe Puerto Rico before abolition and emancipation include it to provide a comparison against islands of similar economic, political, and social influence, such as Barbados.

1.2 Literature Review

One recent historical monograph that provides an abundance of information on nineteenth-century Puerto Rico is Luis A. Figueroa's *Sugar, Slavery, and Freedom in Nineteenth-Century Puerto Rico* (2005).² Figueroa provides valuable demographic data from historical sources such as Fray Iñigo Abbad y Lasierra's *Historia geográfica, civil y natural de la Isla de San Juan Bautista de Puerto Rico* (1866) and Pedro Tomás de Córdova's similarly titled *Memorias geográficas, históricas, económicas, y estadísticas de la Isla de Puerto Rico* (1831).³ Figueroa's work is comprehensive and encompasses the beginning of sugar cane slavery in Puerto Rico in the early nineteenth century, the growing abolition movement of the mid-century, and ends with the emancipation of Puerto Rico's slaves in 1873. His work provides detailed information on the *libertos* (freed slaves) in the labor force and the “apprenticeship” period of quasi-freedom that enslaved people in Puerto Rico experienced after the abolition of slavery before obtaining full freedom from their former masters. Another important work on Puerto Rican history is Joseph C. Dorsey's *Slave Traffic in the Age of Abolition: Puerto Rico, West Africa, and the Non-Hispanic Caribbean, 1815-1859* (2003).⁴ Dorsey's research is specialized in that it focuses on Puerto Rico's commercial importance as a site for promoting

¹ Luis A. Figueroa, *Sugar, Slavery, & Freedom in Nineteenth-Century Puerto Rico* (Chapel Hill: University of North Carolina Press, 2005).

² Ibid.

³ Iñigo Abbad y Lasierra, *Historia geográfica, civil y natural de la isla de San Juan Bautista de Puerto Rico* (Puerto Rico: Imp. y Librería de Acosta, 1866); Pedro Tomás De Córdova, *Memorias geográficas, históricas, económicas y estadísticas de la isla de Puerto Rico* (1831).

⁴ Joseph C. Dorsey, *Slave Traffic in the Age of Abolition: Puerto Rico, West Africa, and the Non-Hispanic Caribbean, 1815-1859* (Gainesville: University Press of Florida, 2003).

slave trafficking over a relatively short period. He discusses other cultures and geographical regions as appropriate, especially African cultures before and after the Middle Passage.

Among English-language works, Puerto Rico is more often a mention in a chapter or two of historians' writings rather than the focus or one of the major topics. One work that does not explicitly focus on Puerto Rico but includes it to a degree that conveys its importance is Christopher Schmidt-Nowara's *Slavery, Freedom, and Abolition in Latin America and the Atlantic World* (2011).⁵ Schmidt-Nowara presents a comparative history of slavery and emancipation in the Spanish Caribbean over the full course of Spain's tenure and occupation in the Caribbean. Overall, Puerto Rico during Spanish colonial rule is simply not a priority or focus for historians whose studies involve the Americas and represents an opportunity for academic research. More scholarship on pre-emancipation Puerto Rico will not only strengthen knowledge of the effects of slavery on the Caribbean but also bring awareness to a part of the history of the Americas that is absent from mainstream social studies curricula in United States public schools.

1.3 Research Goal

Through the first few centuries of Spanish rule, Puerto Rico served as a stopping point for Spanish ships as opposed to a prime destination for colonization and agricultural development because better economic opportunity existed in other islands, such as Cuba, Mexico, and South America. Spanish colonists lived in Puerto Rico, but the Spanish government did not focus much on the island until its former colonies one-by-one fought for and gained their independence. Puerto Rico entered the realm of cash crop-oriented export economies much later than most other Caribbean islands due to the exit of major participants in sugar cane slavery. In 1791, the Haitian Revolution ended slavery in France's largest Caribbean colony, which led to a dramatic rise in the price of sugar cane. Later, British abolitionists' lobbying of Parliament culminated in the emancipation of Jamaica's slaves in 1833, during the height of slavery in Puerto Rico. Both events created opportunities for a Puerto Rican plantation-based economy to grow and flourish. As in Cuba, in the 1810s Spanish and foreign-born planters in Puerto Rico began to invest in plantation infrastructure and prepared previously undeveloped land for planting, built sugar mills, and helped develop the market tools necessary to bring their crops to major ports. By the 1820s, these efforts helped make crops produced with slave labor more profitable and overall led to the emergence of Puerto Rico as a significantly greater sugar exporting colony than it had been in decades prior.

Although Puerto Rico is small geographically and economically, and has little political influence or representation in the imperial states that have governed it, Puerto Rico is still a valuable historical example of what historian Marshall C. Eakin described as a "collision of cultures": Europeans and the diverse group of Africans they enslaved, along with indigenous Taíno cultural influence, created a new "American" culture.⁶ For this reason, studying Puerto Rico in the context of Caribbean abolition during the nineteenth century is important to help broaden the narrative of black history in the Americas and expand the understanding of how slave labor societies in the Caribbean fell. Puerto Rico's geography was essential in forming the social conditions that led to abolition, so this paper utilizes visual aids such as maps and tables to better communicate such information.

⁵ Christopher Schmidt-Nowara, *Slavery, Freedom, and Abolition in Latin America and the Atlantic World* (Albuquerque: University of New Mexico Press, 2011).

⁶ Marshall C. Eakin, *The History of Latin America: Collision of Cultures* (New York: Palgrave Macmillan, 2007).

This paper will argue that Puerto Rico's journey toward abolition in the nineteenth century was unique because of the combination of internal and external factors that shaped it: geography and topography, the island's racial and ethnic demographics, and Spain's dynamic liberal economic policy toward the colony. The island's topography directly influenced the formation of unique racial patterns within island society in the sixteenth century. By the eighteenth and nineteenth centuries, Puerto Rico had a larger free mixed-race population than most other Caribbean island societies, which laid the foundation for an elite-led abolition movement in the second half of the nineteenth century. Unlike other elite-led abolition movements such as that of Britain's crusade to grant emancipation in its colonies, Puerto Rico's abolition movement began among the island-born elites who yearned for a change from Spain's centuries of mercantilist economic policy and controlling political decisions.

CHAPTER 2

Geography as a Factor

2.1 Early Explorers

In the period of European exploration beginning in 1492, Cristobal Colón (Christopher Columbus) and his crew were unaware that they would come across lands completely unknown to the kingdoms back east. Colón believed that they had reached the eastern edge of Asia. In 1503, Amerigo Vespucci wrote in a letter, published as *Mundus Novus*, that Colón's claim was false.⁷ It was soon apparent to the rest of Europe that the new and exciting chains of islands today collectively called the Caribbean was not Asia, and some Europeans shortly thereafter changed course from exploration to colonization. Spaniards called themselves *conquistadores* (conquerors) and viewed islands and coastlines as the source of their future wealth, land, and titles. Early explorers who sailed under the patronage of Spain gradually mapped out coastlines and the interior regions of islands to mark the locations of riches, such as future gold mines. Various aspects of Puerto Rico's geography such as topography, climate, and geology were important factors in the creation of Spanish settlements and plantations and as such, the island's racial demographics, the slave labor force, and the distribution of people across the island.

2.2 Descriptions of Puerto Rico's Geography

One can interpret data from primary and secondary sources to create useful and informative graphics. An important role of Spanish explorers in the late fifteenth and early sixteenth centuries was to survey lands and assess whether or not the land and climate could support mass agricultural projects. In the case of the Caribbean, sugar cane became the commodity crop of choice. Puerto Rico's tropical climate makes it an excellent location for sugar cane production. Climate classification systems are not very precise for island chains, but they are still accurate. Figure 1 depicts the climate of Puerto Rico and its adjacent island possessions. According to the Köppen-Geiger system, most of Puerto Rico has a tropical rainforest (Af)

⁷ Amerigo Vespucci, *Mundus Novus: Letter to Lorenzo Pietro Di Medici* (Princeton: Princeton University Press, 1916).

or tropical monsoon (Am) climate, meaning that the island has a warm and wet climate year-round. A portion of the southern coastal region of the island has a tropical dry winter climate (Aw), which means that the area is warm year-round and receives less rain only in the winter months.⁸

Topography was another deciding factor in Puerto Rico’s agricultural history. Figure 2 depicts Puerto Rico’s two main land types: the Cordillera Central range that composes the high, mountainous interior, and the relatively small coastal plains. The high elevation of the island interior was suitable for coffee production, but not sugar cane. Most Spanish and later foreign planters settled in the coastal regions because they wanted to grow sugar cane for higher profits. This was not only better for agricultural production but also meant that crops had an easier journey to coastal ports for exportation. Sugar cane production existed in the low elevation valley region of Caguas and Cayey, but the terrain was too difficult to traverse for sugar cane plantations to take off there in great numbers (Figures 1-2). The small adjoining islands of Mona, Desecheo, Caja de Muertos, Vieques, and Culebra are not included in many maps in this paper because of their small size and unimportance regarding slavery in Puerto Rico.

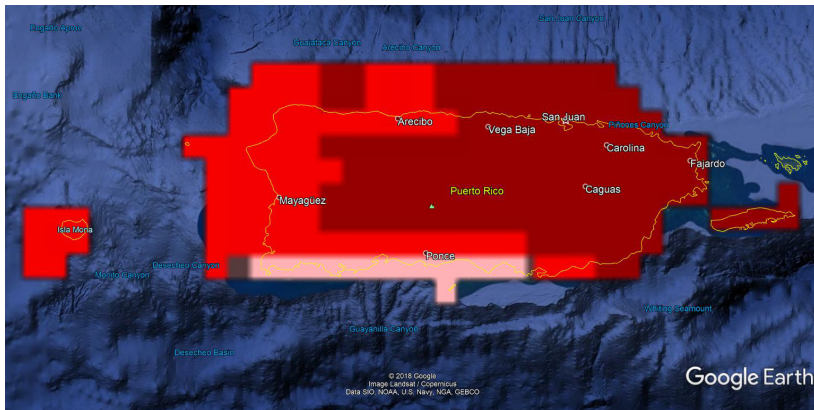


Figure 1: Köppen-Geiger Climate Classification of Puerto Rico⁹

Elevation of Puerto Rico

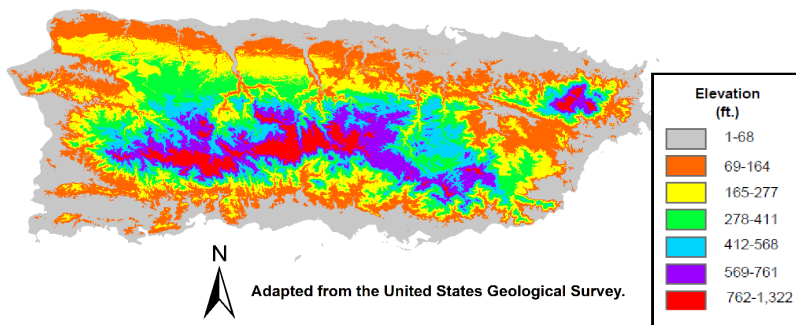


Figure 2: Puerto Rico’s Coastal Plains and Interior Mountains¹⁰

⁸ M. Kottek et al., “Present Climate,” World Maps of Köppen-Geiger Climate Classification, 2017.

⁹ Google Earth, <https://earth.google.com/>; M. Kottek et al., “Present Climate,” World Maps of Köppen-Geiger Climate Classification, 2017, high resolution KMZ file for Google Earth at <http://koeppen-geiger.vu-wien.ac.at/present.htm>.

¹⁰ United States Geological Survey, “100-Meter Resolution Elevation of Puerto Rico and the U.S. Virgin Islands, Albers Projection” (National Atlas of the United States, 2012), <http://purl.stanford.edu/mb182my4891>.

Figures 3, 4, and 5 show the geographic distribution of registered slaves in Puerto Rico. They depict the fifteen *municipios* (municipalities) out of sixty-seven in the years 1828, 1854, and 1865, respectively, that had the most slaves in Puerto Rico. In each year, the top fifteen municipios collectively contained 67.4%, 65.2%, and 65.6% of the slave population for their respective years. The three maps depict a change in concentration of slaves in Puerto Rico from the San Juan-Guayama corridor in 1828 to a heavy concentration along the southern and western coast of the island by 1865. This shift in slaveholding from the island’s Atlantic-facing capital to cities that border the Caribbean Sea suggests that the island’s plantation centers moved during the mid-nineteenth century.

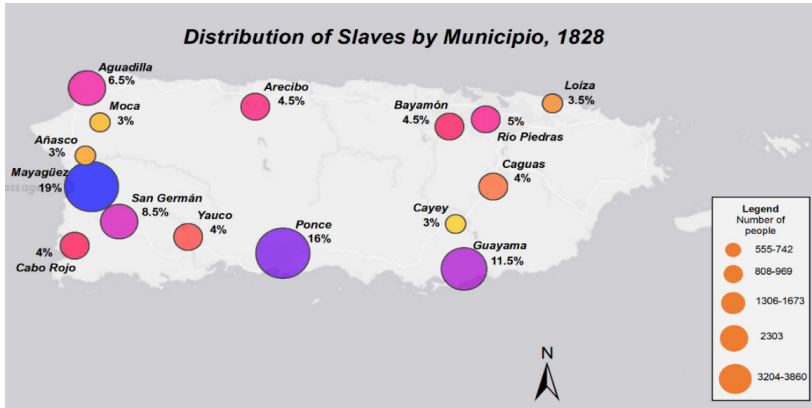


Figure 3: Geographic Distribution of Puerto Rican Slaveholding, 1828¹¹

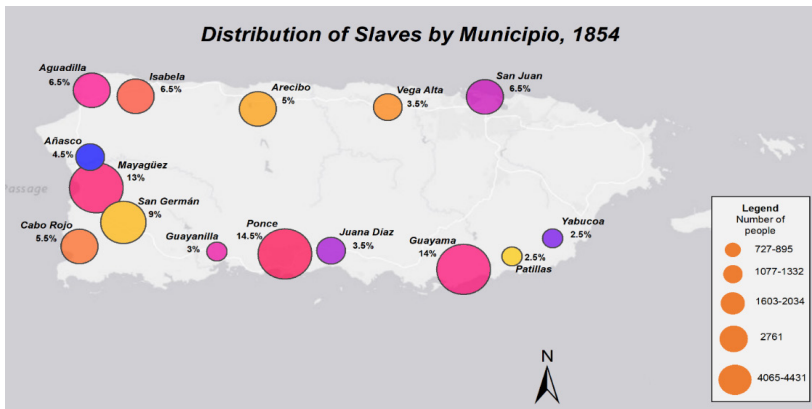


Figure 4: Geographic Distribution of Puerto Rican Slaveholding, 1854¹²

¹¹ Figueroa, *Sugar, Slavery, & Freedom in Nineteenth-Century Puerto Rico*, 54

¹² *Ibid.*

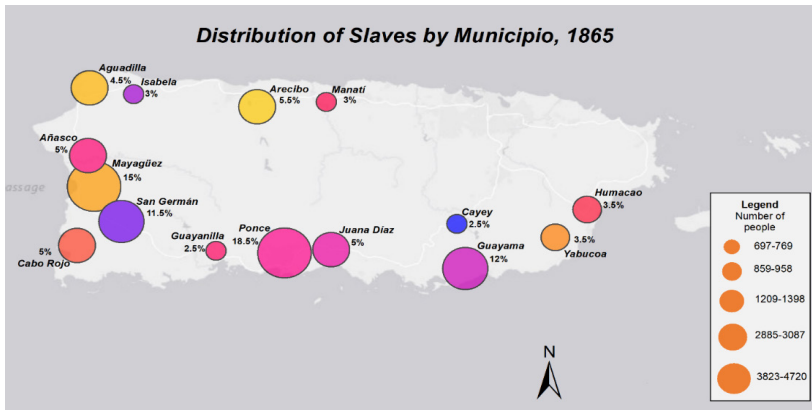


Figure 5: Geographic Distribution of Puerto Rican Slaveholding, 1865¹³

Figure 6 combines information from the four previous maps to create an overall more comprehensive map. It overlays the top fifteen municipios from all three years on the elevation file from Figure 2. The map further shows that, for the most part, sugar cane farming was most successful in the coastal plains. As such, people of African descent likely remained concentrated in these large population centers, leaving the difficult livelihoods of enslaved blacks and libertos open for observation by the more privileged classes of Puerto Rican society.

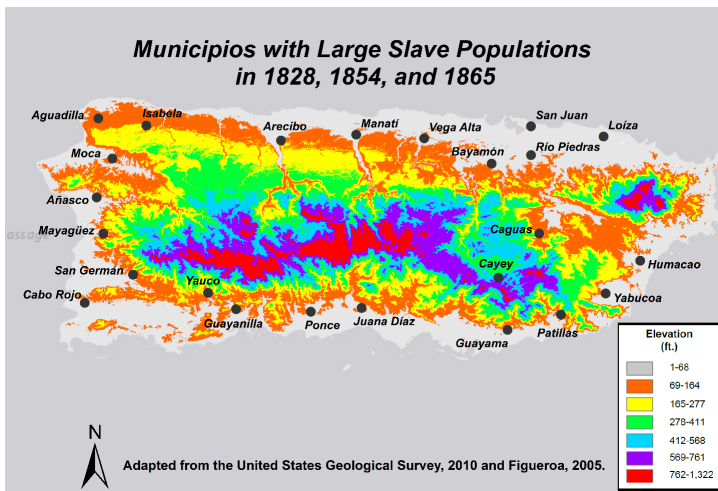


Figure 6: Concentrations of the Largest Slave Populations in Coastal Districts, 1828, 1854, and 1865¹⁴

Figure 7 combines data from three of geographer and academic Rafael Picó's maps from his detailed work *The Geographic Regions of Puerto Rico* (1950). Each of Picó's maps depicts the range of acres of

¹³ Ibid.

¹⁴ USGS; Figueroa, *Sugar, Slavery, and Freedom in Nineteenth-Century Puerto Rico*.

farmland for a specific crop per municipio. Each map has four categories appropriate for the total range of farm acreage for that crop on the island. Figure 7 identifies the municipios that were in the top 50 percent of farm acreage for a crop. Some municipios were top 50 percent producers for two crops instead of one, and some were not top producers in any one crop. Picó also presents maps that show that the Río Piedras through Vega Alta region contained municipios with high acreage of farmland dedicated to grapefruit and pineapple.¹⁵ Although these crops were not as profitable as sugar cane and may not have been a profitable product in the age of slavery, their location in the coastal region further shows that most agricultural activity occurred in the coastal plains and as such the people who would have tended them—enslaved Africans or free people of color—would have settled in such areas.

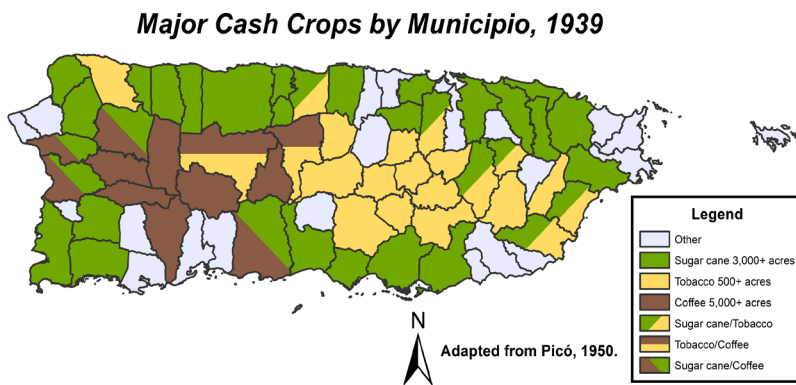


Figure 7: Geographic Prevalence of Sugar Cane and Other Cash Crops, 1939¹⁶

2.3 Conclusions

Together, Figures 1-7 illustrate how the island's geography affected and shaped European settlements and economic activity. The Köppen-Geiger system indicates that Puerto Rico has a tropical wet climate, which is favorable for agriculture. Ample rainfall is necessary for cash crops such as sugar cane and coffee because they are resource-intensive and require large amounts of water for fruitful harvests.

The municipios with high numbers of enslaved people of African descent were in coastal plains regions, except Caguas and Cayey. From 1828 to 1854 slaves became concentrated in the southern and western coastal plains of the island. From 1854 to 1865 this distribution became even more concentrated on the western coast. Slave numbers dropped greatly in the larger San Juan region, which suggests that Puerto Rico's economy improved enough for other more specialized economic activity to occur in that northern portion of the island, that is, business ventures that did not require concentrations of forced slave labor. For each of the selected years for Figures 3, 4, and 5, the top three municipios for each year were Ponce, Mayagüez, and Guayama. Ponce held the number one spot for 1854 and 1865. These municipios are all

¹⁵ Rafael Picó, *The Geographic Regions of Puerto Rico* (Río Piedras: University of Puerto Rico Press, 1950), 135 and 138.

¹⁶ Picó, *Geographic Regions of Puerto Rico*, 102, 164, 185. San Juan municipio represents the historical municipio of Río Piedras; the formerly smaller San Juan municipio is classified as "Other."

located in the southern and western coastal regions of the island and were sites of large-scale plantation agriculture. Additionally, they had essential export infrastructure such as roads and ports.

The institution of slavery shaped the development of most nations in the Americas over hundreds of years, from the early colonial period to the age of emancipation and independence. Slavery prevailed in Puerto Rico's coastal plains in major cities such as Ponce and Mayagüez and nearby towns, creating a seemingly impenetrable chain of chattel slavery around the island. Members of the privileged elite who lived in these populous "urban" areas observed the effects of the relatively new emergence of sugar cane plantation slavery on the island. Unlike in other Caribbean island societies, some members of the educated elite would eventually advocate for the abolition of slavery on the island. Although short-lived, sugar cane's profitability as a commodity crop led to its continued economic importance after emancipation as a means of financial support.

CHAPTER 3

Puerto Rico: The Racial Exception

3.1 Racial Demographics

In Spanish America, the situation of a person's racial heritage often determined status from birth to death. The *sistema de las castas* was a distinctly colorist social structure that dictated how high a person could climb socially and economically. For example, a *pardo* (a person of African and European descent) who became wealthy could purchase a "*cédula de gracias al sacar*" to raise his or her caste designation to one with more European ancestry.¹⁷ White Spaniards used this system to retain their importance and "superiority" in an increasingly mixed-race and "culturally-colliding" society in which European, African, indigenous, and Asian ethnic groups were present.¹⁸

The Spanish holdings in the Caribbean were different from other European nations' territories; the population of Spain's island colonies was composed of two main racial groups: whites and African-descended people. They had either a majority or plurality of whites and sizeable populations of free people of color, with varying degrees of European and African heritage. Other European colonies also had binary societies that were more starkly divided by race and had far fewer free people of color. In these societies, small white populations ruled massive populations of enslaved Africans and their descendants by fear. While French and British colonies continuously imported enslaved Africans, in the Caribbean islands Spaniards stopped importing enslaved Africans in large numbers for a two-hundred-year period spanning the seventeenth and eighteenth centuries.

The effect, then, on the fifty by one-hundred-mile island, the smallest of the Greater Antilles, with inhabitants composed primarily of European, African, and some surviving indigenous heritage, was a much smaller spectrum of colors. In 1800, only 3.0% of British Jamaica's population were free people of

¹⁷ Mark A. Burkholder and Lyman L. Johnson, *Colonial Latin America*, 3rd ed. (New York: Oxford University Press, 1998), 206.

¹⁸ Eakin, *History of Latin America: Collision of Cultures*.

color. Even Cuba's population was only 15.1% free people of color in 1827. In the same year, 38.8% of Puerto Rico's population included free blacks and other free people of color (Tables 1-3). Puerto Rico's racially imbalanced three-part population is one of the most notable characteristics that made this specific island society different from the rest of the Caribbean islands during the age of enslavement and commercial chattel slavery.

3.2 *The Formation of Nineteenth-Century Racial Patterns*

Cristobal Colón first sighted the island that the Taíno called Borikén in November of 1493 during his second trip to the Caribbean. His ships briefly stopped at the island to acquire fresh water and then abandoned the island for over a decade in favor of raiding the gold mines of nearby Hispaniola. By the grace of their Most Catholic Majesties Isabel I and Fernando II of Spain, Colón christened the island la Isla de San Juan Bautista de Puerto Rico. He had jurisdiction over the island but likely had few plans for it because Hispaniola had better economic promise at the time in the form of land, gold mines, and a larger indigenous population to work the mines.

Soon after in 1508, the conquistador Juan Ponce de León initiated active Spanish colonization of the island. In 1520, a ship arrived from Portuguese Guinea—modern-day Guinea-Bissau—to help replenish the rapidly depleting Taíno population.¹⁹ That ship was the first of many to reach the island. It carried 259 people, the surviving 80% of the original 324 Africans who slavers forced aboard ship and subjected to the Middle Passage.²⁰ The Trans-Atlantic Slave Trade Database records only eighty-seven voyages in which Puerto Rico was the primary landing destination.

In stark contrast, the database contains 2,470 entries for Cuba beginning in 1526. Santo Domingo, the modern-day Dominican Republic, was more similar to Puerto Rico with its 109 entries and began to import slaves in 1525 shortly after Puerto Rico. Puerto Rico and Santo Domingo were alike in that they had a substantially large percentage of free Europeans. In 1790, Santo Domingo's population was 32% white.²¹ As Figure 8 shows, Puerto Rico's population in 1802 was 48% white and the white population grew throughout the nineteenth century. Cuba's robust sugar plantation economy developed in the late eighteenth century and gained traction in the 1810s. Puerto Rico and Santo Domingo also experienced economic growth in the nineteenth century from the introduction of sugar cane. What separates the two is that Santo Domingo experienced political and martial conflict due to its problematic relationship with its western neighbor. Haiti invaded and occupied Santo Domingo, which resulted in the end of slavery on Hispaniola completely in 1822. Sugar cane required a steady stream of African captives because the extreme brutality of sugar slavery caused high mortality rates. Puerto Rico had enslaved people but did not have a culture of sugar plantation slavery until the 1810s, so it never fully developed the sugar island population structure of a colony such as Jamaica.

In Puerto Rico, however, export crops were insignificant in the formation of racial patterns during

¹⁹ "List of Voyages," The Trans-Atlantic Slave Trade Database, 2013, <https://slavevoyages.org/voyages/fKrLhuZg>.

²⁰ Ibid.

²¹ Richard A. Haggerty, *Dominican Republic and Haiti: Country Studies* (Washington, D.C.: Federal Research Division, Library of Congress, 1991), 18.

the sixteenth century. The Spanish were far more interested in neighboring Cuba and Hispaniola. After a short-lived period of gold mining and destruction of indigenous society, Puerto Rico became a stopping point for Spain’s military fleet. By the beginning of the nineteenth century, the island existed in a state of near balance between free whites and free people of color, including free blacks. In 1802, these two broad groups accounted for 48% and 43.9% of Puerto Rico’s population, respectively. Additionally, at 8.2% the island’s percentage of enslaved blacks was smaller than any other successful slave-labor- and plantation-based Caribbean colony. Racial patterns as seen in the nineteenth century thus were shaped greatly by internal factors, including topography and economic opportunities for Europeans.

Table 1: Selected Racial Demographic Data of Puerto Rico²²

Year	% Whites	% Free People of Color	% Free Blacks	% Slaves	Total # Population
1776	36.5	42.1	3.5	8.1	80,246
1802	48	33.8	10.1	8.2	163,192
1815	42.4	33.3	6.2	8.4	220,886
1827	49.7	31.5	8.3	10.5	302,672
1834	52.9	28.4	7	11.7	357,086
1860	51.5	41.3	-	7.2	583,308
1867	52.9	40.5	-	6.6	656,328

Table 2: Selected Racial Demographic Data of Cuba²³

Year	% Whites	% Free People of Color	% Slaves	Total # Population
1774	56.2	21.1	22.7	171,620
1827	44.2	15.1	40.7	704,487
1841	41.5	15.3	43.2	1,009,332
1860	57.1	26.7	16.2	1,389,214

Table 3: Selected Racial Demographic Data of Jamaica²⁴

Year	% Whites	% Free People of Color	% Slaves	Total # Population
1775	8.6	2.1	89.3	216,000
1800	8.8	3.0	88.2	340,000

²² Figueroa, *Sugar, Slavery, and Freedom in Nineteenth-Century Puerto*, 48.

²³ David W. Cohen and Jack P. Greene, eds., *Neither Slave nor Free: The Freedom of African Descent in the Slave Societies of the New World* (Baltimore: Johns Hopkins University Press, 1972), 339.

²⁴ *Ibid.*, 338.

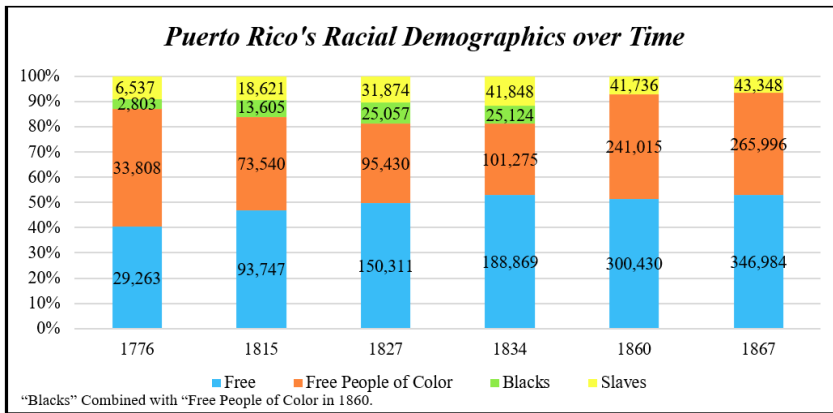


Figure 8: Puerto Rico's Racial Demographics over Time²⁵

One of the single most important factors in the development of Puerto Rico's "blended" society was that the fruitful and boundless American mainland drew young and aspiring Spanish men away from the small and less valuable island of Puerto Rico. Although high school history programs teach students that "God, glory, and gold" in that order brought in the Spaniards, ambition and greed really led the Spaniards to the rest of what we now call Latin America. Disease coupled with European aggression destroyed indigenous societies, cultures, and almost entire civilizations. Puerto Rico did not escape this destruction; there, a combination of disease, violence, and tortuous labor in gold mines decimated most of the indigenous Taíno population and left few prospects for Spanish colonizers for a little over two centuries. Racial mixing occurred during this period of generally lower European immigration and importation of enslaved Africans, leading to a sizeable population of free people almost unheard of in the rest of the Caribbean. The white and enslaved black populations did not increase again until the Spanish monarchy took economic action in 1789 and once again, with greater effect, in 1815.

The timeline in which merchants brought slaves to Puerto Rico and the numbers in which they arrived shaped Puerto Rico's racial demographics in important ways. The island had two main periods of slave trade from 1520 to 1659 and from 1731 to 1859, and Puerto Rican planters imported far more slaves during the latter. At some point during both periods, colonists believed that slave labor was viable. In the first period, they used enslaved Africans to replace the decimated indigenous Taíno population and to help with the initial decades of colonization and agriculture on the island. In the second period, colonists imported even more Africans. The Spanish government instituted benefits and incentives for Spaniards and other Europeans to invest in its American colonies in order to better fund its wars against insurgent mainland colonies.

Throughout the course of the trans-Atlantic slave trade involving Puerto Rico, slavers bought enslaved Africans from ports and kingdoms across Africa's west coast, from the Cape Verde islands to at least one

²⁵ Ibid.

voyage all the way from the Cape of Good Hope. Figure 9 shows every place of purchase of enslaved Africans bound for Puerto Rico as listed in the Trans-Atlantic Slave Trade Database, from specific ports to more general regions. The maps depict only the coastal regions or specific ports in which European traders purchased Africans bound for Puerto Rico, and do not accurately convey the geographic or ethnic origin of enslaved Africans. European slavers going to the Americas almost exclusively sourced enslaved Africans from the western coast. The multiple ports and regions of sale indicate that white slavers took advantage of the conflict among hundreds of different African tribes and ethnic groups to generate financial wealth in the Americas. Throughout the slave trade, slavers and planters purposefully separated Africans whenever possible from people of the same ethnic background, which helped form pidgin languages, mixed cultural beliefs, and syncretic faiths. Puerto Rico already had a culturally mixed island society due to the “clash” of Africans, Spaniards, and Taínos during the first slavery period from 1520 to 1659, so the second slavery period beginning in 1731 led to a culturally mixed society of an even higher degree.

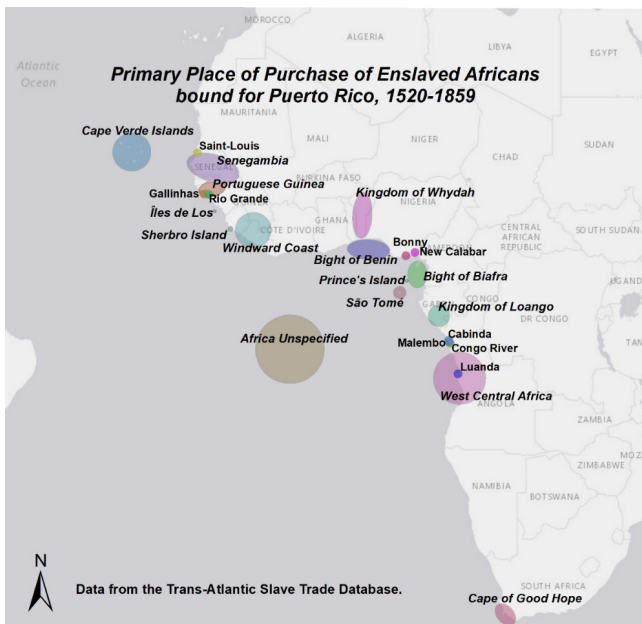


Figure 9: Map of Place of Purchase of Enslaved Africans bound for Puerto Rico, 1520-1859²⁶

Figure 10 shows the geographic and quantitative distribution of ports of purchase, using data from the same voyages in the first map. Of the 8,151 known slaves brought to Puerto Rico from 1520 to 1659, approximately half of them came from the Cape Verde islands. Few to none originated from Cape Verde, however, because the islands were uninhabited before the Portuguese arrived. Cape Verde served as a

²⁶ “List of Voyages,” The Trans-Atlantic Slave Trade Database.

point of trade for Portuguese slavers, who had already purchased Africans from merchants in port cities on the western African mainland, and as such the Portuguese served as “middlemen.” Enslaved people in Puerto Rico were often comprised of groups of Africans who had extended contact with European slavers before once again being sold and shipped to the Americas. After the exchange of human souls in Cape Verde, slavers sold Africans one or more times upon their survival of the Middle Passage within the internal slave trade of the Americas.

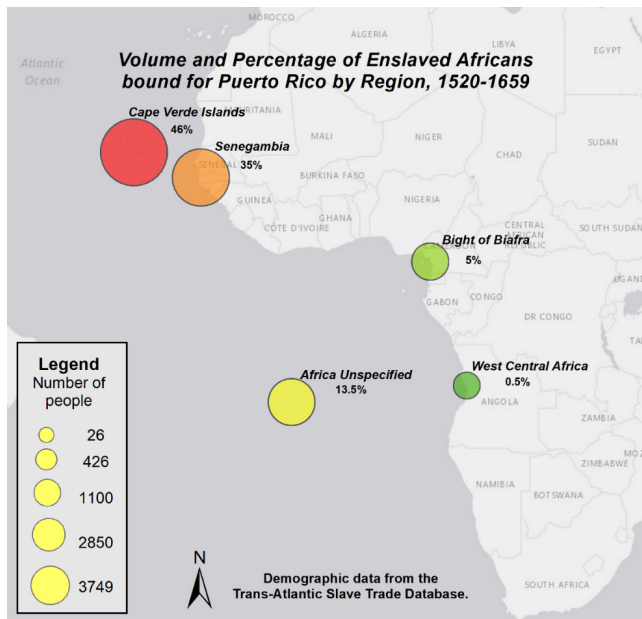


Figure 10: Map of Geographical and Quantitative Distribution of Enslaved Africans bound for Puerto Rico, 1520-1659²⁷

Figure 11 is a continuation of the previous map and displays data for 1731 to 1859, the year of the last recorded trans-Atlantic voyage in the Database. The number of enslaved Africans bound for Puerto Rico in this period increased drastically, especially since part of the period includes the abolition of the slave trade among neighboring powers such as Britain and France. Illicit trade has higher risks but also higher rewards, and slavers purchased 20,163 people to be brought to Puerto Rico. This represents a 147% increase in enslaved people imported between the two periods. Puerto Rico was not a major participant in slave labor societies in the context of the Caribbean as a whole; Europeans imported approximately 4,739,900 enslaved Africans to the Caribbean islands, while white planters in Puerto Rico imported only about 26,900 slaves.²⁸ By these estimates, Puerto Rico accounts for 0.57% of all slaves brought to Caribbean islands. However, its slave population was still important in developing the culture of African-descended people in the Americas. Both the illegal status of the slave trade in the mid- to late nineteenth century and

²⁷ Ibid.

²⁸ “Trans-Atlantic Slave Trade Estimates,” <http://slavevoyages.org/estimates/ugWijPhQ>

inconsistencies in captains’ voyage logs could help account for the higher percentage of enslaved Africans who came from unknown parts of Africa in this second period. Figure 3 also illustrates that the focus of Puerto Rico-bound ships and potentially Caribbean-bound voyages overall shifted south along Africa’s west coast.

As Figure 10 and Figure 11 illustrate, Puerto Rico did not import Africans for a 72-year period. This coincides with a 200-year long period from the late sixteenth century to the beginning of the nineteenth century when Puerto Rico’s economy had little to no demand for slave labor for the creation of local consumer goods. The island’s landowning class did not see the financial value of paying to import African captives when free people of varying mixed ancestry already provided an adequate labor force. During this period Africans and people of mixed heritage turned to what David M. Stark calls the *hato* economy.²⁹ With little Spanish presence on the island to continue European colonization and agricultural development, economic activity on the island revolved around ranching. This helped sustain the population but did not become a major export industry because of Spain’s restrictive intercolonial trade laws and lack of viable markets. Puerto Rico could not legally trade with other Spanish colonies, such as Santo Domingo and Cuba, or such foreign colonies as Jamaica or Barbados. Some inhabitants of Puerto Rico turned to smuggling their goods to other islands to make money while evading Spain’s oversight.

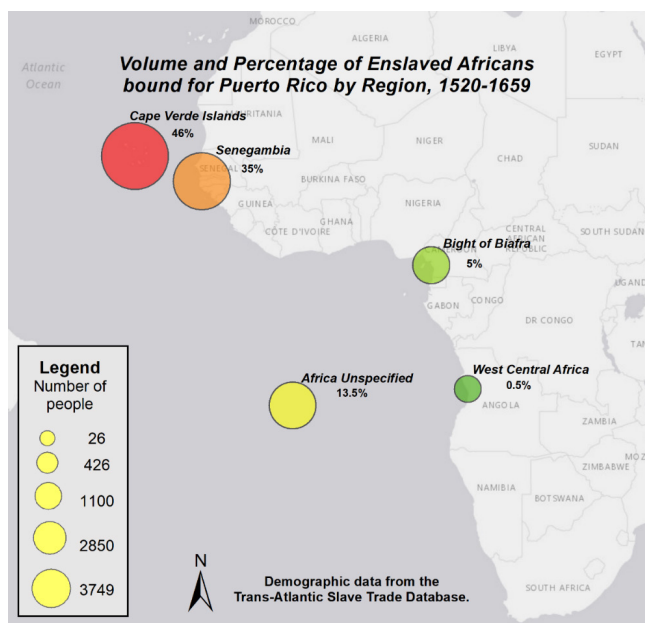


Figure 11: Map of Geographical and Quantitative Distribution of Enslaved Africans bound for Puerto Rico, 1731-1859³⁰

3.3: Relating Race and Spanish Economic Policy

A persisting issue that historians of the Caribbean and Puerto Rico in particular contend with is that

²⁹ David M. Stark, *Slave Families and the Hato Economy in Puerto Rico* (Gainesville: University Press of Florida, 2017).

³⁰ Ibid.

elite, well-educated, and often white or criollo men, not people from different races and backgrounds, wrote the most important published accounts of Puerto Rican society. Their perceptions of the lives of the non-elite classes are either secondhand or shaped by their own experiences and perspectives. Many nineteenth-century works about the Caribbean survive in written and digitized forms; most sources from the period about the Spanish Caribbean were written in Spanish. Works written by non-Spanish witnesses of the era are often found in English, probably because of Britain's interest in emancipation and the end of the slave trade in the nineteenth century.

One such work is George Dawson Flinter's *An Account of the Present State of the Island of Puerto Rico* (1834).³¹ Flinter was born in Ireland and, with few prospects, entered the British military as a mercenary soldier in 1811. He served as a lieutenant and occasional translator between British and Spanish forces until 1816. Although officially on reduced pay through 1832, Flinter entered the Spanish military sometime in the late 1810s and traveled the Caribbean and Spanish American mainland. He wed a criolla woman from a wealthy family in Caracas and as her husband managed her properties, including her black slaves. His experience living in Caracas during the violent independence period shaped his ambivalent attitude toward non-white and mixed-race populations. Later in life, he wrote that a republic is "an uncultivated land [...] a miserable, discontented population" and that they are "faithless, vacillating governments."³² Flinter considered himself to be a staunch royalist and supported Spain and a Spanish line of succession to the throne, since during his younger years he experienced the tumultuous French reign of Joseph Bonaparte. He fought in the First Carlist War in Spain against supporters of the pretender Carlos de Borbón to help secure the reign of Queen Isabel II. Near the end of the war in 1838, Flinter ended his life to avoid capture by the Queen's enemies.³³

In his work, Flinter insists that he has absolutely no bias in his writings because of his wide travels and experiences. He cites his various appointments within the Spanish military, his knowledge as a slaveholder in the Spanish Caribbean and in the mainland, and his several years' experience living in Puerto Rico. It is clear, however, that these and other circumstances shaped his argument. Flinter wrote *An Account* as a letter to the new Queen of Spain, the three-year-old Isabel II, in order to influence the new monarchy and argue that Spain should end slavery in its remaining colonial holdings. Although Flinter said that he "had always felt and acknowledged the injustice and the impolicy of the continuance of slavery under any shape, and had ever been an advocate for its general abolition," his argument to end slavery in the Spanish Caribbean was not based on moral reasoning.³⁴ Rather, he argued that eliminating slavery could promote long-term peace and economic prosperity of the islands he planned to inhabit for some time. His abolitionist standpoint was, interestingly, unaligned with that of his British countrymen.

Flinter's proclamation of abolitionist sentiment was bold for many reasons. First, his apologist work defended Spain's implementation of slavery in its colonies, especially compared with the laws and policies of other European nations. He noted that:

"[...] the French and English commenced the reform of the abuses in the slave laws in their colonies [...] nearly two

³¹ George D. Flinter, *An Account of the Present State of the Island of Puerto Rico* (London: Samuel Bagster, 1834).

³² *Ibid.*, 392.

³³ "Stephen, Sir Leslie," *Dictionary of National Biography*, vol. 19 (London: Smith, Elder &, 1889), 329.

³⁴ Flinter, *An Account of the Present State of the Island of Puerto Rico*, 266.

centuries after their first establishment. The Spanish laws respecting the treatment of slaves were on the same humane basis on which they are at this day, from the commencement of the importation of Africans.”³⁵

As a slaveowner and well-traveled man, Flinter had to have known about the treatment of African slaves throughout the Spanish Caribbean. It is possible that he truly believed Spanish slave practices to be more gentle and humane, as he discusses at length several times in *An Account*. However, it is also possible that his words serve to bolster his loyalty as a Spanish subject and protect his reputation while criticizing the Crown for disregarding the seemingly perfect example of Puerto Rico’s free-labor sector of the economy.

Additionally, Flinter wrote at a time when Cuba was experiencing rapid growth in sugar plantation slavery due to increased investment in and subsequent success with sugar cane plantation slavery. It was remarkable and bold of Flinter to support the end of a policy that brought the Crown so much income, needed for waging Spain’s costly wars, especially as those wars led to independence and income loss from most of Spain’s former colonies. However, Flinter hoped that Puerto Rico could serve as an example of a successful slave-free Spanish colony. He believed that eliminating slavery could improve a colony’s net income because free labor was more profitable than slave labor, when the number of slaves was so small. By Spanish law, planters provided enslaved people rations, shelter, and clothing. It is possible that Flinter foresaw a future in which Cuba’s slave population diminished because of the official end of the slave trade and viewed the abolition of Puerto Rico’s slaves as an opportunity to test out a more profitable economic model amid social changes.

As a foreigner with investment capital looking to escape the violent independence movement in Venezuela, Flinter praised Spain’s actions to improve the status of Puerto Rico. In 1815, Spain’s King Fernando VII issued the *Real cédula de gracias* (royal decree of graces) to support economic growth on the island. Flinter refers to the decree in his letter as the “Regulations for promoting the Population, Commerce, Industry, and Agriculture of the Island of Puerto Rico.”³⁶ This decree provided a long list of economic benefits and incentives for foreigners to migrate to Puerto Rico and invest in agriculture and slave-labor plantations.³⁷ Foreigners gained full Spanish citizenship for themselves and their heirs born on the island. They had no duties, taxes, or tithes to pay for the first fifteen years and received free land on the island. They did not ever have to pay duties or taxes on the importation of enslaved Africans or agricultural labor, and received additional free land depending on the number of Africans imported.

The decree loosened Spain’s traditionally mercantilist economic policy toward its remaining island colonies. Spain wanted to boost economic growth, and by having fewer restrictions and laws, helped to refill the royal coffers. During the first few decades of the nineteenth century, Spain gradually lost its profitable silver mines and other exports when South American Spanish colonies and Mexico won their independence. It is hard to discern from Flinter’s writings how or whether free people of color benefitted from increased economic activity since he was part of the class who were intended to benefit financially from the decree; it is likely, however, that he simply was not concerned with the economic status of free

³⁵ Ibid., 242.

³⁶ Ibid., 3.

³⁷ Ibid., 2-5.

people of color.

Liberal economic policies attracted investors from Spain and other foreign countries, who introduced a new level of money and capital that Puerto Rico had never had before while simultaneously importing more enslaved Africans to the colony. Spain's economic reforms increased European immigration to Puerto Rico and expanded agricultural infrastructure to promote a plantation-based economy. Flinter, however, did not believe that slavery was sustainable in the long run. He advocated for emancipation of slaves in Puerto Rico because he calculated that free labor produced 75% of agricultural products on the island and at a lower cost.³⁸ Due to the fresh memories of the Haitian Revolution and his experience fleeing independence revolts in Caracas, Venezuela, with his wife and her fortune, and racist beliefs typical of the period, Flinter feared violence and slave revolts and as such advised gradual emancipation of slaves in Puerto Rico over a full generation to maintain peace. He wrote that “from [his] experience in the colonies [he] was strongly of opinion that the immediate emancipation of the slaves would be inexpedient and dangerous” and that “preparatory measures” were necessary for any power that sought to emancipate its slaves.³⁹ His ultimate wish was that “the free black and the slave [will] work together in the same field with the white man” after their “progressive emancipation.”⁴⁰ In comparison, Flinter's former countrymen in Britain passed the Slavery Abolition Act in 1833, which ended slavery in most of Britain's empire, including the Caribbean. The British government declared a six-year apprenticeship period—similar to what Spain approved for Puerto Rico several decades later—but granted full emancipation two years early due to protests from former slaves. Flinter's vision of a peaceful multiracial society was progressive for Spanish subjects of the period and his proposal was rejected by the Spanish government in 1837.⁴¹ Although Flinter died knowing that his argument fell on deaf ears, future Puerto Rican-born abolitionists rose up in the succeeding decades to take greater action to end the institution of slavery in their beloved home.

3.4 *Puerto Rican Thoughts on the Abolition of Slavery*

Attitudes toward the trans-Atlantic slave trade, slavery, and emancipation in general began to change in the early eighteenth century with British influence, though emancipation did not become widely popular among the British public until the first few decades of the nineteenth century. The people of Britain, in part due to evangelical Protestant and Gothic literary genre movements, began to fear for their eternal souls after death for all the wrongs their country authorized during the course of slavery and the slave trade.⁴² After Parliament abolished the British slave trade in 1807, the British began to pressure France and Spain to end the slave trade in their Caribbean colonies. However, the Spanish government hesitated to enter talks that aimed to hurt an institution integral to their precarious stability as a major European power. In the first half of the nineteenth century, slavery was too important for the survival of Spain's imperial economy and for Puerto Rico's white planters' profits for a moral argument to have sway with the ruling class, which explains why Flinter based his argument in economic terms. However, as the century progressed, some Spanish Caribbean colonists began to oppose slavery, including members of the intellectual elite in Puerto Rico.

³⁸ *Ibid.*, 263-266.

³⁹ *Ibid.*, 266.

⁴⁰ *Ibid.*, vii.

⁴¹ Segundo Ruiz Belvis, José Julián Acosta, Francisco Mariano Quiñones, and Luis M. Diaz Soler, *Proyecto para la abolición de la esclavitud en Puerto Rico*, 2nd ed. (Río Piedras: Editorial Edil, 1978), 11-13.

⁴² Vincent Brown, *The Reaper's Garden*, (Cambridge, MA: Harvard University Press, 2010).

In 1865, a group of prominent Puerto Rican intellectuals came together to present their argument for the abolition of slavery to the appropriate government board in Madrid. They published their case under the title *Proyecto para la abolición de la esclavitud en Puerto Rico*. Members of Puerto Rico's voting class from the top five most populous municipios elected these men to serve as Puerto Rico's delegates in the Cortés.⁴³ Segundo Ruiz Belvis, José Julián Acosta, and Francisco Mariano Quiñones were born between 1825 and 1830 to affluent families. They completed their educations abroad in places like Caracas, Madrid, France, and the United States. They practiced law, journalism, and politics, respectively, and participated in abolitionist societies such as the *Sociedad abolicionista española* with other Puerto Ricans in Madrid. Although the authors were members of the educated elite, they may have still had direct contact with the group of people whose rights and dignity they so passionately defended. Their abolitionist beliefs, radical for people of their class, were shaped by their foreign educations.

One event that affected Puerto Rican society in the decades leading up to the authors' participation in the abolition movement was the Cortés's decision on April 5, 1837, to start a gradual process of racial whitening known as "blanqueamiento." From that point on, Spain promoted immigration to Puerto Rico "[with exclusion of all other races.]"⁴⁴ As shown in Table 1 and Figure 8, Puerto Rico's total population grew by over 226,000 from 1836 to 1860. In this period, the enslaved African population grew and then dropped again as the slave trade slowed for a small net population decrease. The free population grew by 138% during this period, while the white population grew by only 59%. Part of the large increase in the free people of color population can be accounted for by free blacks and people of mixed race being counted as "free people of color." The increase is still significant, however, because the free black population reported a decline of almost 4,000 from 1834 to 1846. Although immigration brought in white Europeans by the tens of thousands, it was not enough to surpass that of the island's free mixed population. The process of blanqueamiento was thought to "improve" the quality of a population; it was the government's racist belief that a whiter population would be a safer one. After the Haitian Revolution, whites unfairly associated people of African descent with violence and believed that a society with black people would hinder European "progress" in the Americas. Puerto Rico was the most suitable island of the Spanish Antilles for change, assimilation by legislation, and racial whitening to occur because of their already significant free population.⁴⁵

When Ruiz Belvis, Acosta, and Quiñones argued for the emancipation of Puerto Rico's slaves, they composed a case that was at once passionate, scathing, and full to the brim with moral reprimands. They wrote about slavery in the way that contemporary authors and journalists write about hotly debated issues such as illegal immigration and abortion rights. One such quote is that "slavery is always the same: the complete and absolute violation of the human personality."⁴⁶ This differs greatly from Flinter's rather timid statement of "[having] always felt and acknowledged the injustice and the impolicy of the continuance of slavery."⁴⁷ Flinter sent his letter to the Spanish Queen Isabel II's council and asked for the gradual emancipation of enslaved people—the perspective of a "benevolent" planter. In contrast, the Puerto Rican abolitionists went straight to Spain's top legislative body and demanded immediate emancipation.

⁴³ Figueroa, *Sugar, Slavery, and Freedom in Nineteenth-Century Puerto Rico*, 109-110.

⁴⁴ Luis M. Díaz Soler in Ruiz Belvis, Acosta, and Mariano Quiñones, *Proyecto para la abolición de la esclavitud en Puerto Rico*, 12.

⁴⁵ *Ibid.*, 11.

⁴⁶ *Ibid.*, 36. Translated from Spanish to English by the author of this paper.

⁴⁷ Flinter, *An Account of the Present State of the Island of Puerto Rico*, 266.

To Ruiz Belvis, Acosta, and Quiñones, the dignity of a sizeable portion of the island's population was more important than financial compensation for the planters' "lost property." The argument of potential violent slave uprisings, however, was no longer even a semi-logical fear and approached irrational outdatedness. Spain's direct competitors in the Americas had already ended the institution of slavery. Britain abolished slavery in its Caribbean colonies in 1833, France followed suit in 1848, and the United States legally abolished slavery in 1865 with the passage of the Thirteenth Amendment. The age of slavery in the Americas was ending and although it is incorrect to say that emancipation was inevitable in Spanish colonies, the abolition of slavery became an important moral topic to other leading European nations of the time, and the political influence of nations such as Britain and France was integral to finally ending the institution in Spain's territories.

Having a lawyer among their trio, the authors of *Proyecto para la abolición de la esclavitud en Puerto Rico* (1978) refute as many opposing arguments as possible throughout the work. Pro-slavery forces claimed that the emancipation of slaves in Puerto Rico would lead to unrest in Cuba's slavery-driven export economy. The authors acknowledge that that scenario is likely and that Cuba would be better for it.⁴⁸ To them, slavery was an institution that should be completely abolished in all lands. They provided historical examples of slavery and wrote that sometimes the public good was more important than private gain. They discussed Rome at length; Roman emperors were known to put some restrictions on slavery that improved their daily quality of life because it was the best for the public.⁴⁹ Although in this example Rome normalized the practice of slavery and did not seek to end the institution, the *Proyecto* used Rome to point out that government intervention is necessary for a happy and economically driven populace.

The authors concluded their work with a succinct summary of their purpose:

We want and request, in the name of the honor of our country's future, for the immediate volition, radical and definitive, of slavery [...] we entrust always in the educated initiative of the Governor and the straight conscience of public opinion.⁵⁰

This excerpt is notable because it implies that public opinion is honorable and moral enough to support the authors' entreaty. In a society that was still organized around race, the "public" were the elite who had wealth or power, whether it be in the form of farms and plantations or in other activities such as politics and polite society. These groups were probably white or of mixed race and had lighter skin tones. A portion of the upper classes of Puerto Rican society began to feel sympathy toward the lowest class of their island in the decade leading up to emancipation. This was marked by covert participation in Julio Vizcarrondo's *Sociedad abolicionista española*. This change regarding the institution of slavery in the island is significant because it shows that the need for change was not solely an issue brought up by a mistreated and wronged minority group such as in the case of Haiti.

The work of Ruiz Belvis, Acosta, and Quiñones has received little attention among scholars, possibly because historians are more interested in studying the burgeoning Puerto Rican nationalism movement.

⁴⁸ Ruiz Belvis et al., *Proyecto para la abolición de la esclavitud en Puerto Rico*, 98-99.

⁴⁹ *Ibid.*, 35-6.

⁵⁰ *Ibid.*, 98.

A common stereotype about Puerto Rico is that slavery on the island was insignificant; however, the issue of slavery and abolition became entwined with independence and increased autonomy through the agendas of educated men such as Ruiz Belvis. Additionally, the *Proyecto* was written in Spanish and no English translation is available. As such, scholars have largely ignored this important work. One significant exception is historian Luis A. Figueroa, who discusses and analyzes the trio's radical actions in Madrid.⁵¹ Lastly, Puerto Rico is rarely the subject of scholarship in general so scholars simply may not explore all the relevant sources of the period. Their written work still provides an example of how some white elites of Puerto Rican society in the mid to late nineteenth century viewed slavery: as a morally deplorable and economically hindering institution.

Abolitionists in Puerto Rico, from foreign-born slavery apologists such as Flinter to first-generation Puerto Rican activists, such as Ruiz Belvis, Acosta, and Mariano Quiñones, tended to belong to the elite class. The latter were similar to British abolitionists in that they passionately utilized moral arguments against slavery, not just economic ones such as Flinter's. Although not representative of the class of educated elite, abolitionism as a pursuit of some elites suggests that discontent against still-constrictive Spanish rule was prevalent and coincided with the Puerto Rican independence movement led by other elites such as Ramón Emeterio Betances.

The Grito de Lares was an elite-led slave uprising that began on September 23, 1868 in the mountainous town of Lares. Shortly thereafter, small pockets of resistance popped up around the island. Along with others, Betances and Ruiz Belvis began planning the event in 1865 after the government board in Madrid vetoed Ruiz Belvis, Acosta, and Quiñones's calls for immediate emancipation in Puerto Rico. The rebels proclaimed Puerto Rico's independence, but the government quickly shut them down. Officials arrested hundreds of people across the island and the military court sentenced them to die. In 1869 the new governor, José Laureano Sanz, agreed to spare the rebels' lives. He exiled men such as Betances who helped lead the revolt. The Grito de Lares did not achieve its immediate goals of independence, but it did lead to Spain granting the island a small amount of autonomy in the form of representation in the government in Madrid, and it inspired smaller uprisings throughout the island in the years leading up to abolition of slavery in 1873. The event is now largely associated with the Puerto Rican independence movement, but at the time, the uprising began to convince the Spanish government that the leaders of the anti-slavery movement could in fact become more dangerous if left to meld with proponents of Puerto Rican independence. The combined efforts of Betances and Ruiz Belvis already proved combustible, and Spain could not afford to let the duo's future efforts engulf the island in flames.

CHAPTER 4

Conclusion

4.1 Future Directions

There is ample opportunity for future research on Puerto Rico regarding the age of enslavement,

⁵¹ Figueroa, *Sugar, Slavery, and Freedom in Nineteenth-Century Puerto Rico*, 108-112.

emancipation, and transition between emancipation and full freedom. Physical archives in Puerto Rico's municipios and Library of Congress collections may prove to be valuable sources of information. There are also several digital resources that could provide insight into Puerto Rico during the nineteenth century. To expand this study in particular, the author can return to the Trans-Atlantic Slave Trade Database and examine the Intra-American Slave Trade portal of the website. The query results of this portion of the Database could provide additional information about Puerto Rico's economic importance in relation to neighboring Caribbean islands. Although Puerto Rico received relatively few slaves directly from Africa, it is possible that Puerto Rico acted as a "middleman" and was an active participant in the intra-American slave trade. Overall, the expansion of this study could prove valuable in bettering the understanding of how, when, and why people of African descent came to Puerto Rico and how their arrival shaped the island's slave labor force. This would be valuable in expanding the black narrative in the Americas and help better understand why men like Ruiz Belvis, Acosta, and Quiñones risked their personal careers and reputations to demand immediate emancipation on an island with comparatively fewer slaves. Other digitized resources include the Library of Congress's "Chronicling America" website and Newspapers.com. A comprehensive search of period newspapers could bring a greater understanding of both common and elite people's experiences regarding slavery and later events that spurred Spain toward granting emancipation, such as the Grito de Lares slave uprising. Newspapers and physical archival records could also provide concrete information important to Puerto Rico's economy. Newspapers may provide advertisements for agricultural land, slaves, or products for sale. A preliminary look at nineteenth-century newspapers included notices for runaway slaves and prices for crops that may have been grown using slave labor, such as sugar cane and coffee. Historians such as David M. Stark have made use of parish holdings, especially baptismal records, marriage certificates, and death certificates of enslaved people and free people of color in Puerto Rico.⁵² These kinds of concrete data are valuable because they can be collected and analyzed to create maps. It is important to present quantitative information in visual forms such as maps and tables so as to engage the learner. Maps especially are useful because they can summarize large spreadsheets of data in an easily understandable and visually appealing manner. It is imperative that historians undertake more research projects on Puerto Rico under Spanish colonial rule, and contemporary projects should utilize freely accessible software, such as those of mapping technologies, to further engage visual and pictorial learners.

4.2 Concluding Thoughts

Although a comparison of abolition and the end of slavery in Puerto Rico and Cuba, Santo Domingo, or even the United States would bring greater context as to how the emancipation of Puerto Rico's slaves functioned differently, time constraints and the time-consuming process of historical research prevented this paper from covering more geographical and temporal material. As scholars such as Díaz Soler have pointed out, Puerto Rico's unique population demographics and social structure allowed for abolition to come in 1873, far sooner than it did for Cuba in 1886. Puerto Rico is a small island, but at the time of the

⁵² Stark, *Slave Families and the Hato Economy in Puerto Rico*.

abolition of slavery it played a significant role as Spain's first Caribbean colony to exist without slavery. Understanding the abolition of slavery in Puerto Rico is important both as a point of comparison for Americans' generally slanted view and education on the trans-Atlantic slave trade and to expand and bring voice to the narratives and experiences of various peoples during the formative decades of the far western hemisphere.

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McNair Abstracts

Summer Research

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AUTOMATED PROCESS FOR CELL EXPANSION

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This research focuses on improving the current stem cell production methods since most of the current methods are controlled manually. The object is to design a mass production process that can be controlled by a computer. However, due to the sensitivity of stem cells, they need to be grown in sterile and controlled environments. Stem cells will be attached and incubated inside Hollow Micro Carriers, HMCs, during the growing period to protect them from external effects, which can be a reason for the death of or differentiation of the cells. For successful process design, there is a need to know the HMCs' properties and their behaviors during the stem cells expansion process. This research takes into consideration other variables that can harm the cells. Thus, several experiments were conducted in the lab in order to understand these properties. Based on the experiments' results, a proposed process that consists of controllable equipment will to be used to build the production plant. Currently, we are working to build the plant at our lab, where we will test the process progress and the computer program that controls the process using Acrylic plastic balls, ABs instead of HMCs.



CARBON STRUCTURE FORMATION IN SILICON OXYCARBIDE CERAMICS

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Silicon oxycarbide (SiCO) is a polymer-derived ceramic with promising applications as a functional ceramic, in additive manufacturing, and for energy storage. SiCO comprises so-called “free” carbon embedded in an amorphous matrix, and properties of the material depend not only on processing parameters and the amount of carbon in the material, but also on morphology of carbon: how it is connected with itself and how it is embedded in the surrounding matrix. In this study, we use molecular dynamic simulations with an empirical potential (Tersoff-type) to explore formation of carbon structures in SiCO during pyrolysis and annealing of the materials at high temperatures. We model different annealing procedures, vary heating and cooling rates, and realize structures comprising distinctly different carbon morphologies. Isolated carbon atoms of a molecular precursor are initially well dispersed throughout the material. Upon annealing they combine to larger, but finite, segregations of single-layered carbon sheets. These carbon segregations separate the surrounding amorphous matrix, essentially confining it in small domains. Continuity and sizes of these domains are related to the amount of free carbon and to the composition of the material. Further annealing yields formation of tubular carbon structures. Ultimately, tubular structures convert into large graphitic segregations.



NEURAL ACTIVATION IN THE TAIL OF THE VENTRAL TEGMENTAL AREA OF FEMALE RATS

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Addiction is a brain disease that results from chronic enhanced activation of brain structures of the mesolimbic dopamine reward pathway by drugs of abuse. This results in long-term functional changes in the brain's reward pathway. Sex differences in behavioral responses and neuroadaptations resulting from chronic drug use have been established. These sex differences are associated with fluctuating hormonal levels during the reproductive cycles of females. For example, in female rodents, estradiol influences dopamine activity within the mesolimbic reward system such that drug-directed behaviors are enhanced. The tail of the ventral tegmental area (tVTA) is an important regulator of dopamine activity within the mesolimbic reward pathway. Previous studies have characterized activity of tVTA cells after cocaine administration in male animals. The present study was conducted to determine if cocaine also activates this nucleus in female rodents. Adult female Long Evans rats were treated with cocaine or saline, and standard immunohistochemical techniques were used to measure neural activation (c-Fos expression). Our data indicate that cocaine-treated females express more c-Fos positive cells in the tVTA compared with those treated with saline. Further analyses will increase our sample sizes and add groups of male animals to permit statistical comparison for potential sex differences.



WORK DESIGN AMONG ELANCERS

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Due to advanced technologies, growth in the digital world, computers, and easy access to the internet, the popularity of non-standard work arrangements is on the rise. However, more research is needed to understand how to develop better strategies to improve eLancer work outcomes. Thus, our study focused on how non-standard work arrangement can be designed to maximize job performance and satisfaction while reducing stress and frustration. More specifically, the following two research questions were proposed: (1) Which work design modification strategies are effective in impacting eLance work design characteristics? (2) Do eLance work design modifications impact work outcomes via mediating mechanisms. Our results indicated that six of eight work design characteristics were related to various mediating mechanisms (e.g., flow, subjective monotony). In addition, flow was positively associated with task satisfaction, and subjective monotony was inversely linked to both stress and work frustration. None of the mediators predicted task performance. These findings suggest that eLance work design can influence work outcomes via mediating processes, which demonstrates that eLance work design can impact both the quality of work completed, as well as affect worker affective and well-being outcomes. Future research directions and practical implications are discussed. Keywords: non-standard work, eLancing, microwork, virtual labor, work design



SCINTILLATION IN ARGON GAS AND COSMOGENIC SIMULATIONS FOR NEXT-TON: A TWO-PART STUDY OF EVENT DETECTION CAPABILITIES IN NEUTRINO EXPERIMENTS

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Experimental neutrino physics is a field of constant technological advancement. Small-scale testing and simulations are essential for experimental development and adaptation. This study presents two experiments, one physical and one computational, in the interests of improving event detection capabilities of gaseous media neutrino experiments. Our first experiment involves an analysis of the scintillation properties of gaseous argon. It has been shown that xenon-doped liquid argon is advantageous over pure argon due to its shorter time constant for radiative decay, which we hope to replicate using gaseous media. We have made preliminary investigations of the potential experimental effects of environmental light, organic fluor, tetraphenyl-butadiene, and application of electric field in pure argon. In a separate study, we investigate a new tonne-scaled design concept for the neutrinoless double-beta decay experiments of NEXT. We present the results of cosmogenic neutron and muon event simulations to test improvements in background reduction for the latest experimental design. We find that the addition of a water tank shield around the detector reduces background neutron interaction to negligible levels, while the effects of muon events require further investigation.



**SOCIAL DYNAMICS OF A CAPTIVE
WESTERN LOWLAND GORILLA
(GORILLA GORILLA) HAREM**

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Each captive gorilla group is unique, and understanding how gorillas function both in captivity and in the wild is essential to creating a healthy and enriching environment for them. The goal of this study is to describe the Dallas Zoo's Gorilla gorilla harem in a social perspective as well as to create activity budgets for the animals' behaviors. For thirty minutes, all-occurrence, interval (once per minute), and continuous data were recorded for each focal observation using ZooMonitor®. The data were then analyzed through Microsoft Excel using pivot tables to filter by behavior, focal animal, interactor, and channel type. Study limitations restricted the number of sessions per focal to fourteen in all, yet specific trends supported by current literature were still discernible. Aggression appeared to be an indicator of the previously suspected female dominance hierarchy, as the putative highest-ranking female was more aggressive towards the lowest-ranking female. Dominance-aggression data were also supported by the high percentage of affiliation between the dominant female and the silverback. The silverback was found to have a higher affiliation with the infant of the dominant female than with the infant of the lower-ranking female. Further observations are required to support these trends.



**ADDITIONAL KEYS TO DIFFERENTIATING AMONG SONORA
EPISCOPA, S. SEMIANNULATA AND S. TAYLORI
IN THE FIELD**

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Sonoran snakes are small colubrid ground snakes that display a high degree of color evolution. A recent genomic study utilizing mitochondrial sequencing and ddRADseq discovered that the genus *Sonora* is paraphyletic to two other genera in the snake tribe Sonorini: *Chilomeniscus* and *Chionactis*. For this reason, it was proposed that the three genera be collapsed into one genus, *Sonora*. While there are established keys to distinguishing between most species of *Sonora*, three species in particular: *S. episcopa*, *S. semiannulata*, and *S. taylora* have been noted to be indistinguishable from one other in certain locales due to sympatry and homoplastic morphology. This project focuses on finding new morphological keys by reviewing scale differences. Close visual examination of representatives of the three species revealed that there are small differences in the anterior gular, gular, temporal, and pre-ventral scale counts between all three species. Additional morphological traits such as snout-to-vent length, total ventral scale count, sub-caudal scale counts, and tail length were collected on a larger number of snakes labeled as *S. semiannulata* and *S. episcopa*. However, additional genomic and diagnostic data must be collected to confirm their species and sex in order to render the data useful.



FIRST GENERATION AFRICAN AMERICAN MALE COLLEGE STUDENTS NAVIGATING A PREDOMINATELY WHITE INSTITUTION: A SCOPING REVIEW

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The purpose of this scoping review was to provide an overview of identifying experiences, including the challenges and barriers of first generation African American males attending a predominately white institution. The scoping review is a helpful way to synthesize information about a large topic. This review has demonstrated the importance of the themes pertaining to challenges and barriers. A search was conducted in five bibliographic databases to identify literature pertaining to first generation African American male college students in predominantly white universities. Review selection and characterization were performed by two independent reviewers using pre-selected inclusion/exclusion criteria and search terms. The search identified 41 relevant articles published from 1990 to May 2019, and revealed nine common themes: micro-aggressions, identity & self-esteem, mental health, sense of belonging, leadership roles/getting involved on campus, discrimination & oppression, retention, student affairs professionals helping African American males, and African American males & mentorship. This scoping review has demonstrated the breadth of experiences of first generation African American male college students at predominantly white institutions and as such, sheds light on what higher education institutions might need to do to improve the experience and success of first generation African American male college students.



VISUALIZATION OF PROLIFERATION AND DIFFERENTIATION OF C₂C₁₂ MUSCLE CELLS THROUGH THE USE OF FLORESCENT MICROSCOPY

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Interest in finding ways to combat muscular diseases is great, and many companies are invested in finding improved methods towards production quality livestock. Progress in these areas requires a precise understanding of muscle cell growth at the molecular level. Myoblasts are the embryonic form of myocytes. Myoblasts differentiate into myotubes, which are the matured forms of muscle cells. In the process of differentiation, myoblasts elongate and narrow. As the myoblasts elongate, they encounter other cells. The cells then begin to fuse, resulting in myotubes. We used fluorescent microscopy to visualize the cell maturation. We prepared cell plates using the C₂C₁₂ mouse muscle cell line and then stained the cells using a FITC tagged MHC-Ab to see the elongation and fusion of the cells. The cells were also stained with DAPI to view the nucleus. We found that the cells experienced differentiation under the specific conditions of the experiment, including the supplement of bovine serum to the media. However, while the dyes from the staining did appear, unknown problems resulted in the antibodies not appearing under the fluorescent microscope. This research could lead to advances in therapeutic strategies for sports medicine and livestock production.



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