

TXSTUR

Texas State Undergraduate Research Journal

Volume IV | Issue I

TEXAS STATE
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MEMBER THE TEXAS STATE UNIVERSITY SYSTEM

Spring 2016 |

Texas State Undergraduate Research Journal

A peer-reviewed journal for multidisciplinary research

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DEAR READER,

We are thrilled to present to you the fourth volume of the *Texas State Undergraduate Research Journal*. TXSTUR has undergone a number of changes within the past year, including the loss of our esteemed advisor Mr. John Hood and a change in management. Despite all the changes, this volume is our best yet, and we're committed to growing our publication with every new issue. We are proud to offer such a service to our fellow Bobcats, and in the future we hope to see even more of our students utilize TXSTUR as their stage to present their devotion to academia.

This volume showcases some of the most insightful undergraduate research currently taking place at Texas State University. The work featured in this volume includes an analysis of female roles in developing countries, an article delving into the history of Vodou, anthropological work on gender discrepancies in skeletal remains, and research on object oriented ontology. We are extremely grateful for our distinguished authors, each of

whom has put in countless hours to make this publication possible.

We would like to thank the Dean of the Honors College Dr. Heather Galloway for her unending support of the editorial team and her overall devotion to research and progress. We would like to thank all of the accomplished undergraduate students who submitted their work; we are proud of our fellow Bobcats breaking the boundaries of research through their exemplary works. Finally, we are particularly grateful to our peer reviewers and editorial board. Our publication would truly not be possible without them.

We look forward to seeing the new realms of research our students will explore in the future, and encourage our readers to consider publishing your research in the Fall 2016 edition of TXSTUR. You can find more information at our revitalized Undergraduate Research website, txstate.edu/undergraduateresearch/txstur.html.

SINCERELY,
SARA PAVEY & LUKE JENKINS
MANAGING EDITORS, *TEXAS STATE UNDERGRADUATE RESEARCH JOURNAL*

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No Pressure, No Diamond: A Portrait of the Black Student's Experience in the Texas State Honors College

By: Sydney Curtis

This research portrait investigates the experience of black students who participate in the Texas State University Honors College. The methodology for this research is portraiture, a qualitative, ethnographic research method. Data was collected through interviews with six black students currently studying in the Honors College at Texas State University, site visits on campus, a review of literature in the field of Honors and higher education, and personal narrative. Results of this study conclude that black students in the Texas State Honors College withstand internal and external pressure to perform academically, and are successful when the pressures experienced are shared through close personal relationships with other Honors students and professors. These positive and negative pressures work together for black Honors students' achievement of personal and academic success — their transformation into a metaphorical diamond. The findings of this research may have implications for prospective black Honors students, as well as Honors College faculty and administrators interested in black students' perceptions of Honors programs, and their recruitment and retention therein.

The Honors College building, Lampasas Hall, is located high on a hill, lower only than Texas State University's oldest, most famous building, Old Main. Getting here everyday is a journey that I gleefully undertake in comfortable shoes. I walk downhill from my home, past a grassy playing field, sometimes by a small group of deer (if it's early enough in the morning) and then it's uphill from there. Usually in the beginning of my daily trek, there are a handful of other students walking the same way as me, but little by little, they begin to thin out the higher I climb. As I pass a large pale cactus near the front of Lampasas, I sometimes wonder how many other students will reach these heights; when I open the doors and see my peers inside, I realize not many black students have made the climb.

This research portrait is an exploration of the experiences of black students, myself included, who are currently enrolled in the Honors College at Texas State University. This is a low-risk qualitative study, and was exempted by the Texas State University Institutional Review Board. The methodology for this research is portraiture, which entails collecting data through four different sources and the formation of an overarching metaphor to connect and exemplify findings and theories. I gathered my data through interviews, a literature review, site visits, and personal narrative.

Six of my peers in the Honors College, three black women and three black men, consented to be interviewed. My literature review consists mostly of articles from peer-reviewed journals within the fields of higher education and college student development. I visited the Honors coffee forum as well as Meet the

Professor Night, one of the biggest Honors events each semester, to collect observational data. Finally, I included sections of personal narrative to help weave together the context of my data. My findings indicate that black Honors students at Texas State University positively benefit from the small, intimate classes and discursive teaching methods Honors provides, and that we succeed the most when we form close relationships with mentors and peers in Honors. Overall, the Texas State Honors College is an open environment receptive to our thoughts and perspectives.

Black students' experiences in the Texas State Honors College are much like the organic process of diamond formation. In the diamond cycle, CO₂ buried deep within the Earth is heated, pressurized, and rises to our planet's surface. Similarly, black students are sparked to participate in Honors, all while bearing the weight of internal and external pressures. These negative pressures, when combined with the positive influence of close relationships with friends and mentors in Honors, complete our transformation into unique jewels. Just as diamonds vary by cut, color, carat weight and clarity, so do black Honors students' goals and ambitions. Henceforth, the word "diamond" as used in this research portrait, symbolizes any positive achievement or success as embodied by the black Honors students described.

Context and Background

I was accepted into the Texas State University Honors College in March 2014. Dr. Galloway, the Dean of the Honors College, personally signed my acceptance letter, with a friendly message about

her upcoming study abroad trip to Phnom Penh, Cambodia. My journey in the Honors College began at the Royal University of Phnom Penh in a course called Teaching Physical Science to Children. Along with five Cambodian physics students and Dr. Galloway, who has a doctorate in physics, we learned how to demonstrate physics principles with meager objects in a hands-on way. Nita, Huot, Virak, Sak, and Chetra were all much

"Just as diamonds vary by cut, color, carat weight and clarity, so do black Honors students' goals and ambitions."

shorter than me, but their thin arms still hung long at their sides like mine, and their copper skin shone brightly even through the haze of clouds overhead. Those Cambodian students were the last people I was in an Honors class with who actually looked similar to me. My senior year at Texas State, I found myself to be the only black woman in the Honors thesis preparation course, as well as a class called Portraiture: Writing Yourself into Academia. My own experience in the Honors College is what prompted me to investigate the reasons why my black peers and I decided to remain as part of an environment in which we are a distinct minority.

Originally, I only wanted to investigate what motivates black students' participation in the Honors College. I have since expanded my investigation to include the overall experience of black students in the Honors College. My research will help fill in existing gaps concerning

black students' success and representation in collegiate Honors programs. Other studies regarding black students in higher education focus on exploring their academic motivation through the use of behavior scales, surveys, and social cognition theories. This research will present similar findings, but in a more direct and organic way: through word-of-mouth from black students themselves. This article also examines the impact of the Honors learning environment on black students' success. Qualitative studies of this type tend to be interpretive of black students' experiences, rather than analytical or descriptive (Griffin 388). My research is unique in that its purpose is to create a holistic image of what it is like to be a black student in the Texas State Honors College. For this reason, implications of the data I have collected may enable Honors faculty and staff to have a better understanding of black students' experience in their programs, and may ultimately improve their recruitment and retention therein.

Methodology

Portraiture is a qualitative, ethnographic research method, created by Dr. Sara Lawrence-Lightfoot at Harvard University. It is a method of inquiry and documentation for research in the social sciences which systematically combines empirical descriptions of spaces, subjects, and emotions. Portraits are carefully designed to capture the dimensionality of human experience in a social and cultural context (Origins & Purpose). Data is collected with scientific rigor, though all of the information used to create new sociological theories is derived from qualitative sourcing, and the formation of an overarching

metaphor. Unlike other methods of qualitative research, portraiture is reliant on personal narrative and the researcher's perspective. Recognizing and incorporating my own experiences and opinions is crucial to the construction of the conclusions and theories I draw from my data.

Data for this research was collected through personal narrative, interviews with six subjects, field visits, and a literature review. The narrative portions of my portrait mostly arise from descriptions of the research subjects and background information about our relationship. In addition, my comments and observations from field visits will thread my perspective throughout the work. I have included anecdotes of my experience in the Honors College, as well as relevant moments throughout my education as a whole.

Interview participants are six of my peers in the Honors College, who consented to be identified by name: Tyler Smith, Joseph Sikazwe, Brittini Young, Travis Green, Storm Tyler, and Adam Odomore. They are

"High-achieving black students are usually very driven and intrinsically motivated."

each high-achieving black students whom I met and befriended during my undergraduate study. Interviews with Tyler, Joseph, Brittini, and Travis took place in various rooms in the Honors building, Lampasas Hall. I interviewed Adam at Stellar Cafe, a local coffee shop, and Storm in my studio apartment. Their responses to interview questions, as well as my notes on our surroundings and their behaviors during the interviews will comprise a substantive amount of

data for this research portrait.

I conducted site visits in the Honors coffee forum, a common area in Lampasas Hall, and at Meet the Professor Night, an event for Honors students to preview courses and professors available for them to enroll in the coming semester. In addition, I visited a freshman Political Science class on the same evening as Meet the Professor Night to draw direct comparisons between the behavior and social interactions of Honors students and non-Honors students. My observations from these visits comprise about one fourth of my research data, which will be used to exemplify themes and ideas that I read in the literature or were stated by my interviewees.

Literature Review

Scholarly articles I reviewed are from the Journal of College Student Development, the Journal of Negro Education, and the Journal of the National Collegiate Honors Council. Those articles that will be most frequently referenced in the findings of this study are described below. The most pertinent articles were from the Journal of College Student Development.

Sharon Fries-Britt at the University of Maryland conducted a study in the late 1990s, which examined challenges faced by 12 high-achieving black students enrolled in a merit-based scholarship program. Her research method was qualitative and conclusions were generalized based on participant responses during interviews. Categories of evidence she found included the students' challenges with blending racial and academic identity and challenges of identifying with peers. The study also outlined the significant role faculty play in the development of black students'

academic identity. Although this source is somewhat outdated, the conclusions drawn are still relevant and consistent with more recent research, and therefore useful for this study.

Kevin Cokley of the University of Texas at Austin conducted a confirmatory factor analysis of the Academic Motivation Scale with black college students. While the results of this study were inconclusive, it was valuable in providing a few key bibliographic references for me to investigate. A study by Matthew Reeder and Neal Schmitt analyzed the differences between the academic achievement of black students at Predominantly White Institutions (PWIs) and Historically Black Colleges and Universities (HBCUs). This source is an excellent qualitative study that exemplifies the nature of the challenges black students at PWIs face and must overcome to succeed in their academic endeavors. It emphasizes that black students at PWIs must be exceptionally self-reliant and motivated to succeed as a minority in their college environment.

One of the most valuable sources I found was published by Dr. Kimberly Griffin. Her study entitled "Striving for Success: A Qualitative Exploration of Competing Theories of High-Achieving Black College Students' Academic Motivation" is similar to the original idea I had for this research. In the study, she assessed the academic motivation of nine black collegians attending a large, public university (Griffin). Her findings were categorized using the self-determination theory, socio-cognitive theory, and attribution theory to describe the source of the students' motivation. The findings did not conclude that any one of

these theories was more prevalent than the others in describing the students' motivation, but that there was a combination of motivating factors at work within the students.

Findings

Through my interviews with students, review of literature, and personal experience, I have synthesized the findings of this study into three distinct themes. Each of these themes represents the major components of black students' experience in the Texas State Honors College. My findings indicate that black students in the Texas State Honors College are under significant external and internal pressure to succeed academically. However, we benefit greatly from the positive pressure of the Honors College's intimate learning environment, and the personal relationships we develop with peers and professors therein. Finally, the Honors College's value of diversity makes it a welcoming environment for black students to share their perspectives. The combination of internal and external pressure with the intimacy of the Honors environment allows black students to successfully advance through the Texas State Honors College, transforming us into diamond.

Withstanding the Pressure

Like all high-achieving undergraduates, black students are under an exorbitant amount of external and internal pressure to succeed academically. Scholars who have studied black student development agree that high-achieving black students are usually very driven and intrinsically motivated; this trend was consistent among my research participants. However, the variety of external pressure black students endure has

not been as thoroughly categorized. In addition to the traditional stressors of college life, black students in the Honors College are also fighting to meet parents' expectations, stand out, and overturn assumptions, all while striving to meet personal goals.

Black students begin shouldering external pressure to succeed academically even before the moment they decide to apply to the Honors College. I learned this from my first interviewee, Tyler Smith, whom I met on the first day of class in Fall 2015. She sat regally at one of the round tables in the Honors Coffee Forum, listening to music. Her Marley Twists fell in long ringlets from a high bun crowning the top of her head. Even while looking down with headphones in her ears, her aura was energetic and inviting, and I just had to say hello. About one month later, we sat together in a study room in Lampasas to talk about her experience in the Honors College.

My first question for her was simply, "What motivates you to be involved in the Honors College?" She answered, "I guess I would have to start with the fact that my mom is a teacher, and she always had a sense of wanting us to be overachievers." I thought briefly about my own mother, who teaches seventh grade English, but couldn't remember ever feeling any distinct pressure from her to succeed academically. I had heard stories from my classmates growing up about parents who would "ground" their children for bringing home a shabby report card, but all of my discipline had been for bad behavior at home, not my performance in school. Tyler continued, "Since a young age, she has always told me, 'Oh don't think you're just gonna go through and

do things as easily as other kids.'" Seeing Tyler smile as she imitated her mother, I could tell that she did not resent her for instilling her with what I viewed as an inferiority complex. Our interview had only just begun, the first of six I would conduct during this research, and it seemed I was actually off to a not-so-simple start.

Scholarly literature also attests to the role parents play in shaping high-achieving black students' academic motivation. Dr. Kimberly Griffin's study "Striving for Success: A Qualitative Exploration of Competing Theories of High-Achieving Black College Students' Academic Motivation" outlines the effect of family influence on black student's academic motivation. Her findings concluded that "one external source of motivation reported by almost all participants was their parents" (Griffin 392). While this is consistent with what I learned in my interview with Tyler, it only reflects parents' influence in shaping black students' overall academic direction. Tyler's account of her mother's influence is also exemplary of the pressure Tyler felt to succeed as a minority student.

Dr. Griffin's study also described attempts to disprove negative stereotypes about the academic abilities of black students as another externally inspired source of their academic motivation (Griffin 393). According to Reeder and Schmitt, African American students at PWIs must exert a greater degree of perseverance and drive in order to achieve the same level of performance as their counterparts at HBCUs (Reeder and Schmitt 32). This implies that as black students attending a PWI, my participants and I naturally have to work harder than our peers to

succeed academically. Perseverance in academics means committing oneself to the attainment of goals and priorities in academic pursuits “regardless of the potential difficulties and impediments that might prevent potential goal attainment” (Reeder and Schmitt 32). These findings exemplify the racial aspect of the external pressure affecting black Honors students, before they even step into their first Honors class. During my interview with Storm Tyler, she mentioned that she applied to the Honors College specifically to set herself apart from the predominantly white crowd. “As a minority and as a woman,” she said with certainty, “I knew that every extra thing I did would help me to stand out.”

Black Honors students not only strive to stand out from the crowd, but are driven by a personal need to succeed. Intrinsic motivation is the “inherent tendency or desire of the individual to learn, explore, and seek challenges because of the inherent interest and enjoyment experienced by an individual” (Cokley 126). I see these qualities embodied by Adam Odomore, my friend and interviewee who graduated in December of 2015. I watched with pride as he presented his research on global education for women at the Honors undergraduate thesis forum. Although he has reached the pinnacle of his education thus far, and is “very excited” about what lies ahead for him, his journey in the Texas State Honors College actually began with a setback. At the time he applied, Adam’s GPA did not meet the 3.25 requirement for admission into the Honors College. He recalled the trying time, saying that after he applied, “Dean Galloway emailed me back saying that the essay I wrote was very, very good but to

work on my GPA and then I could get in. So I wrote her back saying, ‘you know, I’m going to be applying again, so please don’t read my essay from last time,’” he chuckled with a bright smile. Adam cited his own determination to succeed, graduate with Honors, and set himself apart from the crowd as reasons for his persistence to be admitted into the Honors College. He exuded confidence as he sat across from me in Stellar Cafe, stylishly reclining in his tweed jacket and brown beret. I could hear the passion in his voice rising over the clacking of the espresso machine behind us, his pride in his accomplishments as infectious as the chill of the autumn wind outside.

While Adam’s determination to participate in the Honors College was born of his own intrinsic motivation, another interviewee, Travis Green, revealed the extent to which an academic superiority complex may also place external pressure to succeed on black Honors students. Travis’ active participation in the Honors College is as much a testament to his own interest in advancing his scholarship, as it is to how greatly he was influenced by his experience competing among other high-achieving students in high school. Before coming to Texas State, he recalls learning in a cutthroat environment where Advanced Placement (AP) students “had our own hallway and took all of our classes together, completely separate from other students, who were addressed as the regular students or the riff-raff.” I was shocked at the harsh terminology, and wondered whether it was the students or faculty at his high school who perpetuated its use. He went on to explain that it was, in fact, his teachers and principals

who implied that non-AP students were to be looked upon as lesser. Travis carried a superior mindset with him as he transitioned into college, but soon discovered that “nothing he did in high school really mattered anymore.” The playing field was leveled and Travis was forced to figure out what he was going to do to keep himself from falling in among the crowd of average students. Although his ultra-competitive view towards school “put him in a really bad place,” it was a key factor in what led him to participate the Honors College.

Sitting Among the “Riff-Raff”

One of the site visits I conducted for this research illustrated the unpalatability of a non-Honors learning environment, and why Travis so vehemently rejected it. On the evening of Wednesday, September 30, 2015, I was running late. I drove straight to campus from my internship out of town to attend Meet the Professor Night. I was anxious to learn more about the Honors courses offered in the coming semester, particularly African American Popular Music. Meet the Professor Night was my best chance to hear more about the content of the class, as well as complete a reservation form so that I would be guaranteed one of twenty available seats. If I missed the presentation, my chances of getting into the class were slim. I threw open the doors to the Alkek Teaching Theatre, hurried around the corner to find a seat, and froze. Speared by the hundreds of eyes that flew in the direction of my noisy entrance, my first thought was “this is definitely not Meet the Professor Night.” Standing awash in the lethargic atmosphere, my next immediate thought was “these are definitely not Honors students.”

I had accidentally stumbled into a non-Honors, freshman-level political science class.

Sitting among the slouchy, texting, typing Texas State University Class of 2019, I began to again familiarize myself with their classroom environment. The auditorium-style lecture hall holds around four hundred students at a time. One lone professor stood forty rows below where I was seated in the back of the class. She was lecturing off of a handout outlining key points about the amendments of the U.S. Constitution. I arrived at the end, but could tell the information projected onto the large screen behind her covered important, relevant material — Miranda Rights, representation by a lawyer, and how to defend oneself when tried in court during trying times. Collective murmurs rose from the more attentive students when asked a general question about the document on screen; the rest didn't bother to raise their gaze from their own laptops, as though the professor had not spoken.

Although not all the freshmen

accents, and attentiveness. Class was dismissed seven minutes early and the freshmen, in all of their colors, flooded out the doors. Some took note of me on their way out, probably trying to remember if they'd seen me in class before. In some small way, it pleased me to be the subject of their bright curiosity, and to blend in, for just one moment, with so many other diverse students.

Igniting Through Intimacy

Black Honors students seldom experience the comfort of camouflage among peers. On the contrary, we are under great pressure to make ourselves more visible. By electing to separate ourselves in order to realize our own potential, minority students often feel quite isolated within communities of high achievers, just as I did in my Honors classes at the beginning of the semester. However, the intimate environment of the Texas State Honors College, and the relationships developed between students and faculty therein give black Honors students the greatest

around a campfire. Two steep staircases decorated with beautiful Southwestern mosaic tile connect the stone foyer downstairs with the creaky wooden floor upstairs. There are only two classrooms in Lampasas Hall. Instead of desks, students sit at long conference tables arranged in a rectangle. The entire layout of the Honors College is centered on creating conversation and stimulating thought.

Lampasas Hall is a physically welcoming and relaxing environment, but the Honors College itself is an advanced academic community for serious scholars to come together and challenge each other's thoughts and perceptions. "You get this kind of dichotomy in the building," as Storm pointed out in our interview. The dual nature of the Honors College's relaxed atmosphere and the challenging academic work that goes on inside creates an environment particularly predisposed to community building, which is critical to black students' success. In a study completed by Dr. Sharon Fries-Britt at the University of Maryland, interviews with twelve black merit scholars enrolled in the Meyerhoff Program for STEM students revealed the need of high-achieving black students to "connect with a community of peers" (Fries-Britt 59). For the students in her study, as well as my own interviewees, becoming a participant in an Honors program "was a welcome opportunity to express their interests in their academics and still be embraced as authentically black in a community of peers who shared similar interests" (Fries-Britt 61). Black students benefit from their friendships in the Honors College community, but even more so from the intimate learning environment

"When faculty members assume minority students are capable and have something to contribute, they help eliminate some of the barriers the students encounter in academics."

gathered in the Alkek Teaching Theater were active participants in their political science class, they were members of a sundry and vibrant graduating class. From where I sat, high in the back of the auditorium, I saw students of all shapes, sizes, and styles — each a unique reflection of their background — conglomerated together in one space. I saw great beauty in their varied expressions,

opportunity to withstand the pressure we must bear to become diamond.

The atmosphere in Lampasas Hall promotes a comradery uncommon in non-Honors settings. The lights are comfortably dim in the entrance area and the coffee forum. Several small circular tables fill the room; their darkly colored wood evokes memories of gathering

within individual Honors classes.

As I mentioned before, classes in the Honors College are usually limited to twenty students to “facilitate an intimate learning environment and encourage connections between students and faculty” (Honors Courses). The personal relationships Honors students develop with their professors are what really set their academic experience apart from those of non-Honors students. When faculty members assume minority students are capable and have something to contribute, they help eliminate some of the barriers the students encounter in academics (Fries-Britt 63). Storm told me about one such professor that taught Honors Graph Theory. “I had always struggled with math, you know. But she really helped me out. She encouraged me and broke things down so that I could really understand. I ended up making an A in the class.” Storm’s success in an advanced Honors math class perfectly illustrates of the positive affect intimate interaction with faculty has on black Honors students’ academic success.

Black students in the Texas State Honors College generally get a lot of support from the Honors faculty as they contend with the stress of classes and other obligations. However, relationships with friends in the Honors College are also crucial in securing black students’ success. Although academic ability is a major factor in the identity development of high-achieving black collegians, connections with other like-minded students are also very important (Fries-Britt 59). Several of my interview participants, including Joseph, Storm, Adam, and Tyler were actually brought into the Honors College community because of the

guidance or mentorship of a friend who was already a member.

Tyler recalled a black woman named Alex, who has long since graduated from Texas State, who went out of her way to encourage Tyler to get involved with the Honors College. “She took me on a tour around the whole place and talked to me about the Honors College. Seeing her as a black female working here, being an Honors College student, and doing her thesis, I was just like ‘wow like that’s what I wanna do.’ That’s really what started it all off.” Tyler now works as a receptionist for the Honors College, herself. I listened to her eloquently present her Honors thesis about Haitian Vodou last November. She graduated with Honors along with Adam and Brittini in December 2015. Tyler’s involvement in the Honors College perfectly represents the overarching theme of this research. She was under an exorbitant amount of pressure to succeed academically, but within the positive, intimate environment of the Honors College, she became part of a supportive community and developed relationships that aided her transformation into a diamond.

The Diamond of Diversity

Texas State University is a PWI rapidly diversifying with every new class. As of Fall 2014, forty-nine percent of undergraduate students are white, eight percent are black, and a whopping thirty-three percent are Hispanic. The university does a good job of providing academic, cultural, and personal support for these and other minority students through clubs and organizations. Since 2004, Texas State University and the surrounding community participate in an intellectual awareness and conversation initiative

that focuses on a different theme each year; this is called the Common Experience (Common Experience). Faculty and staff in the Honors College, particularly Diann McCabe, are important members of the committee who select a theme and organize events for the Common Experience each year.

The Honors coffee forum in Lampasas Hall is home to the Gallery of the Common Experience. Curated art that evokes the year’s Common Experience theme are showcased on the walls of the coffee forum in an exhibition every semester. The Fall 2015 collection was *Las Manos Que Crean: Chicano Heritage, Culture & Meanings*, in accordance with the Common Experience theme showcasing the shared heritage between the United States and Mexico (Gallery of the Common Experience). Abstract Chicano artwork draws viewers to canvases with bold color. The familiarity of Johannes Vermeer’s “Girl with a Pearl Earring” caught my eye, except the woman’s face was painted as a sugar skull rather than the original fair maid. The artist’s rendition of this well-known image pays homage to the beauty of his heritage, specifically the traditional Mexican holiday *Día De Los Muertos*. Understanding what the skeleton woman represents, when melded with the renowned beauty of “Girl With a Pearl Earring,” expands the viewer’s idea of what is beautiful. Similarly, black students add to the value, beauty, and diversity of the Honors College.

My interviewees and I only represent a fraction of the diverse students in the Honors College. We are a varied group within the black community as well. I asked each of my participants which minority groups they identify with and

received a wide array of responses. In addition to being black, Storm, Tyler, and Brittnei identify as women. Storm is also of Cape Verdean descent. Adam, Joseph, and Travis all consider themselves black men, and Adam and Joseph originally hail from Nigeria and Zambia, respectively. Travis also identifies as an openly gay man. Acknowledging diverse backgrounds not only plays a role in the success of black students in the Honors program, but also ensures the growth of shared

“She was under an exorbitant amount of pressure to succeed academically, but within the positive, intimate environment of the Honors College, she became part of a supportive community and developed relationships that aided her transformation into a diamond.”

perspectives and fruitful discussion within the Honors College as a whole. When describing the importance of diversity to the success of the Honors College, Brittnei stated beautifully:

I think it's really important to show diversity. It's not even, you know, just ethnic-wise, but in diversity of thought because if you have... the same person, not personalities but... the same views or perspectives, it's kind of hard to see where growth can occur in the

Honors College. I think bringing in different ideas and perspectives, adding into that diversity of thought, would help the Honors College to progress.

The extent to which the Honors College values diversity is reflected in the variety of courses offered every semester. From “Integral Ecology” to “Women in Texas Music,” Honors classes give students the opportunity to learn with a small group of peers who share their interests, or learn about something altogether new to them. For Joseph Sikazwe, a Pre-Medical student, “being in the Honors College broadens [his] interactions with other students from different majors instead of just staying in the Supply [Science] and Chemistry buildings all of the time.” Honors courses prioritize student-professor discussion, writing, and projects rather than lectures and multiple-choice tests, which creates a challenging and rewarding learning environment that suits the learning styles of numerous students (Honors Courses). For black Honors students, the opportunity to leave their usual learning environment and participate in the various courses offered by the Honors College is a great way to advance diverse interests outside of our degree plans.

My major is Athletic Training. Most of my classes are about sports science and anatomy, and are held in a building separated from the main campus. However, as a part of the Honors College, I have been able to gather with students from many different disciplines to learn about other topics of great personal interest to me. For example, the Honors course Geography of Africa introduced me to a rich realm of information in the field of African Studies. Adam, who was born in

Nigeria, also took this course, which eventually led to the development of his undergraduate thesis topic. Honors courses have something to teach everyone involved, no matter their background, and are a great representation of the diversity of thought the Honors College promotes so successfully.

The value of diversity is only as effective as it is represented in any community. In the context of diversity in higher education, representation means a noticeable presence of other people within a shared minority group. At the end of every interview, I asked my participants “What do you think your presence adds to the Honors College?” Consistently, this was the most difficult question for them to answer, and the question that brought out the greatest variety of responses. Storm said she brought diversity of thought and valuable new ideas to the Honors College. Brittnei stated that she brings a new perspective to Honors as a non-traditional undergraduate, since she is an older student among her younger peers. Tyler said with a giggle, “I just think I’m goofy.” For Joseph, sharing stories about his upbringing in Zambia and Great Britain is his greatest contribution to the diversity of Honors. Travis, who struggled with this question during an otherwise robust interview, said that he brought to Honors “a certain vitality.” Adam shared a sentiment common among all of my interview participants: “There’s not very many African Americans in the Honors College, so for me, I stand out. Very much so.” Black students’ acknowledgement of their contributions to the Honors College is critical to their transformation into a unique diamond. Through their success, and even simply their

presence in Honors, they aid in the formation of the diamond of diversity.

Conclusion

This research portrait sought to create a holistic image of black students' experiences as participants in the Texas State University Honors College. Interviews with six black Honors students, information from scholarly articles, and descriptions from site visits were woven together to exemplify three key themes. The first theme outlined the sources of internal and external academic pressure black students endure. The second discussed how the intimate nature of the Honors College environment gives black students the best chance to withstand those pressures. Finally, the third theme outlined the Honors College's overall value of diversity and the particular ways in which black Honors students add to it. The pressure black Honors students feel to succeed, combined with the nurturing environment of the Honors College, gradually transforms us into diamond. Just as no two diamonds are alike, the unique backgrounds of every black Honors student add to the diverse cultural makeup of the Honors College.

Limitations of this study mostly stem from the nature of my relationships with my interview participants as well as my affiliation with the Honors College itself. Subsequent studies about black students' experiences in the Honors College could be conducted by a third-party researcher to vary the results. In addition, four out of six research participants are International Studies or International Relations majors. Future studies could include a larger cross-section of participants from

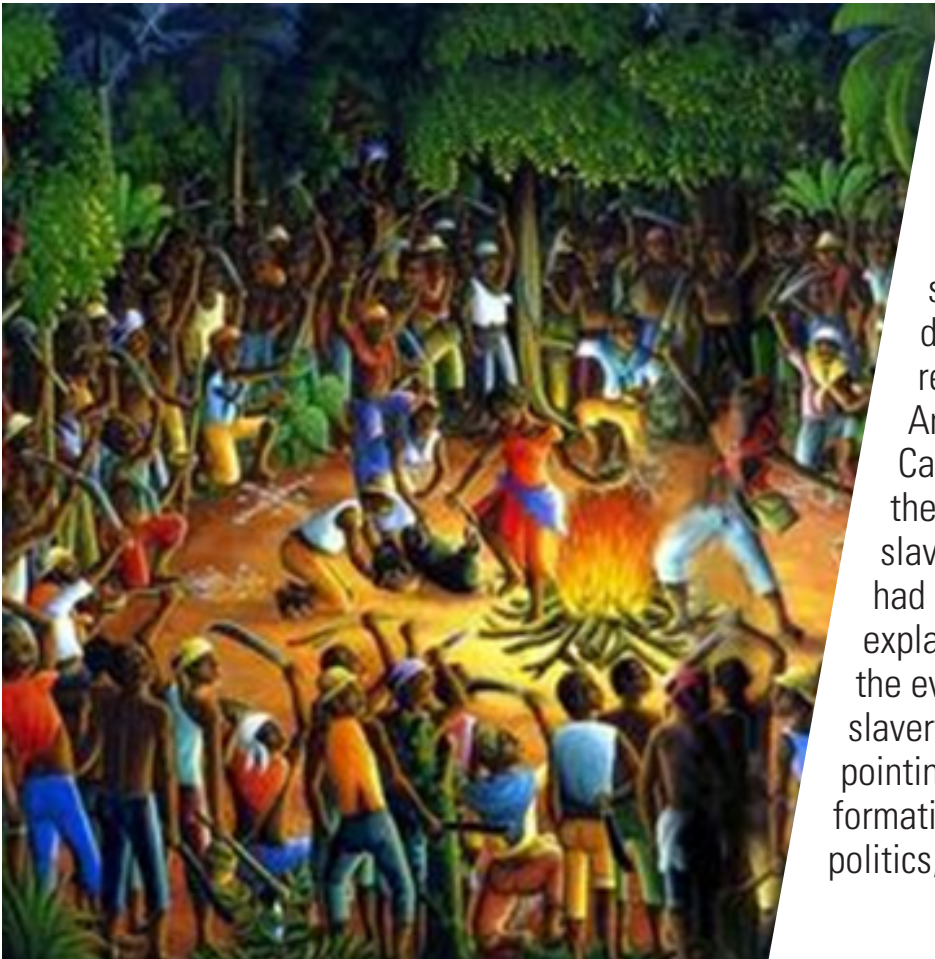
many different fields of study. The findings of this research may have implications for prospective black Honors students, as well as Honors College faculty and administrators interested in the recruitment and retention of black students in their programs. Institutions looking to increase the enrollment of black students in their Honors programs can apply the results of this research by surveying black students who are already participants regarding their concerns about diversity and representation in their Honors program. The trend of friendship I discovered between peers as part of black students' recruitment into Honors could be applied to peer-mentorship programs to arouse more black students' interest in Honors. At my own institution, this research will help exemplify the positive impact Texas State Honors faculty has on black students, which will hopefully cause the deliberate continuation of this behavior.

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The Journey Of Vodou From Haiti To New Orleans: Catholicism, Slavery, The Haitian Revolution In Saint-Domingue, And Its Transition To New Orleans In The New World

By: Tyler Janae Smith



This article explores the origin of the Vodou religion, its influences, and its migration from Haiti to New Orleans from the 1700's to the early 1800's, with a small focus on the current state of Vodou in New Orleans. It dates Vodou to a West African religion that was brought to the Americas and combined with Catholicism. The article discusses the effects a high Catholic population, slavery, and the Haitian Revolution had on the creation of Vodou. It also explains how Vodou has changed with the evolving state of Catholicism and slavery in New Orleans, as well as pointing out how Vodou has affected the formation of New Orleans culture, politics, and society.

The term Vodou is derived from the word Vodun, which means “spirit/god” in the Fon language spoken by the Fon people of West Africa. Vodun is not only a word, but also a religion that preceded Vodou and was practiced by the Fon people. The Fon were an official subject of the Yoruba people of Oyo who would raid the Fon villages in order to supply the slave trade they had with the French and Spanish empires. With the transplantation of the Fon people, their religion and culture were spread to other countries, including Saint Domingue (which is now a part of present-day Haiti). Thus the formation of the Vodou began. Vodou embodies the spirit of a culture; it is a way of life. It allows one to become a god instead of just being in contact with a god. Vodou was a quintessential part of the success of the Haitian revolution and to the growth of black communities in many areas of the United States.

In this essay, Vodun refers to the original religion that originated in West Africa before the transition to Haiti. Vodou will be used to refer to the byproduct of the blending of Vodun and African culture with a foreign culture and religion. This

culture to flourish.

Today, Vodou is understood by popular culture, as expressed by Hollywood’s portrayals, as a mythical religion that predominantly casts spells, creates potions, and deals with zombies. Hollywood, and a large portion of society, group Vodou in with Wicca (the religious belief in witchcraft that is based in harmony with nature and divinity), Satanism (a religious belief that Satan is an actual deity to revere and worship), and the occult (simply another way of identifying a belief as unknown). One of my main goals for this article is to demystify Vodou, and to share enough knowledge about it so that it might be recognized as a valid religion.

What is Vodou, and how does it work?

To begin, Vodou is defined by Michel Laguerre, the anthropologist and author of *Voodoo and Politics in Haiti*¹, as the folk religion created by a merge of indigenous African religions, specifically from the Fon, Yoruba, and Ewe people of West Africa, and its cultural assimilation and syncretism with a foreign culture. In order to demystify Vodou, it is necessary to explain how a Vodouist practices their

lwa, a spirit or god, to come down and possess a person to help the community. There are many lwa, each of which represents a different aspect of life. In the beginning of these ceremonies, the congregation, or sossyete, will commence the *Priye Ginen*, a prayer that is sung to open the ceremony and welcome the lwa. People in the congregation bring libations and foods that appeal to the certain lwa that they are trying to communicate with.

Depending on which lwa they are trying to communicate with or what they are requesting from the lwa, an animal sacrifice may be necessary. One of the most important lwa that must be sung to in any Vodou ceremony in order to get in contact with all of the other lwas is Papa Legba. Papa Legba is an lwa that is the gate-keeper between the humans and the lwa; therefore, if Papa Legba is not contacted, no other contact can be made. This is the prayer used to call to Legba to allow him to open the gates:

*“Papa Legba ouvri bariè pou moun, Ago-è. Atibon Legba ouvri bariè pou moin Ouvri bariè pou moin papa pou moin pasè, Lè m rètounin ma rè mèsè loa io. [Papa Legba, open the gate for me, Ago-è. Atibon Legba, open the gate for me. Open the gate for me, papa, so that I may enter the temple. On my way back, I shall thank you for this favor.]”*²

“Vodou embodies the spirit of a culture; it is a way of life. It allows one to become a god instead of just being in contact with a god.”

article will examine three aspects of Vodou: its relationship with Catholicism, the effects of slavery and the Haitian Revolution, and its migration to New Orleans. The essay goes into detail about Vodou’s transformation once it reached New Orleans and how it enriched the community, allowing the city and its

religion with rituals and ceremonies. There are many rituals, and many of them differ significantly, but this article will discuss the public Vodou rituals that are hosted by a houngan or a mambo, the Vodou priest or priestess. The purpose of a Vodou ritual is to invoke an

¹ Laguerre, Michel S. *Voodoo and Politics in Haiti*. N.p.: Macmillan, 1989. Print.

² Laguerre, Michel S. “Living Spirits in the Haitian Environment.” *Voodoo Heritage*. Beverly Hills, CA: Sage Publications, 1980. 48. Print.

request, even though it is said that Papa Legba never denies a request for him to open his gates. After the gates are open, the drummers start beating their drums, and the sosyete begin to sing and dance to welcome the lwa to the ceremony. The lwa come down and are able to help the sosyete by prophesizing, healing, cleansing, and blessing the sosyete. The sosyete receives food during the ceremony, but they also continue to sing and dance for each lwa that has possessed one of the members. This kind of ceremony is held many times throughout the year by a houngan or mambo to solve problems or to celebrate the lwa. The times of the Vodou ceremonies are planned on the dates of the feast for the Catholic saint that is interchangeable with the African lwa.

Roots

Vodun is a religion that is practiced most regularly by the people of Western Africa. Vodun originated out of Dahomey, now consisting of present-day Togo, Benin and Nigeria. It is important to note the huge impact of Islam on the religion of Vodun before it reached Haiti. In fact, there is a West African group called the Gnawa who practice rituals similar to Vodou, but also include Islamic references and origins, such as Islamized lwas, trances, dances, and animal sacrifice. Even Alfred Metraux, a renowned Haitian scholar, gives reference to Senegal lwas that are saluted with salam, an Islamic greeting meaning “peace”.

There is very little documentation on the early interaction between Islam and Africa except for a few accounts written by the geographers al-Bakri and Ibn Battuta. Abū Ubayd al-Bakrī was an Islamic geographer and historian who lived

in the 11th century. He wrote *Book of Highways and of Kingdoms*, which details the people, culture, and the political atmosphere across regions of Asia, Africa, the Middle East, and many other places. He mainly took his accounts from merchants, geographers, and explorers.

Ibn Battuta was a 14th century explorer and geographer that started his journey with a desire to make the Hajj, the Muslim pilgrimage to Mecca; his journey would continue for 29 years. He is often regarded as the greatest traveler of all time. He traveled all over North Africa, the Horn of Africa, West Africa, Eastern Europe, the Middle East, South Asia, Central Asia, Southeast Asia and China. The Moroccan Sultan at the time requested that Ibn Battuta



dictate the tales of his travels to a scribe, resulting in his book *Rihla: My Travels*. Ibn Battuta only traveled to countries that had Muslim embassies within them, so there was possibly an established Muslim community in West Africa before the 14th century. However, if there was some kind of Muslim embassy in West Africa during that time, it was not documented and cannot be verified.

Our first true insight into the growing relationship between Islam and Africa is from the 14th century

when it was reported that “the Malian king Mansa Musa brought back from a pilgrimage to Mecca the architect al-Sahili, who is often credited with the creation of the Sudano-Sahelian building style. Musa’s brother, Mansa Suleyman, followed his path and encouraged the building of mosques, as well as the development of Islamic learning.”³

While Vodun itself was heavily influenced by Islam, the current form of Vodou became what it is through Catholic influences in Haiti. Catholicism had two totally different effects on the religion of Vodou within Haiti and within New Orleans. In order to properly determine the effects that Catholicism had in Haitian and New Orleans Vodou, the breakdown of Catholicism within the confines of the two different places will be given separately.

Catholicism in Haiti

The first Africans most likely began to arrive on the island of Haiti, then called Hispaniola, around 1512. At the time, the island was under Spanish control, and they sent missionaries and Catholic priests to travel with their soldiers wherever they went. This is not surprising as the Spanish conquistadors’ infamous goals were the three G’s: gold, God, and glory. As a result of Europe’s discovery of the New World, Rome decided to take this as a challenge from God to convert the people of the New World to Catholicism. The Roman Catholic Church asked for the youth within the church to become

3 Department of Arts of Africa, Oceania, and the Americas. “Trade and the Spread of Islam in Africa”. In Heilbrunn Timeline of Art History. New York: The Metropolitan Museum of Art, 2000–. http://www.metmuseum.org/toah/hd/tsis/hd_tsis.htm (October 2001)

missionaries and share their faith with the people of the New World. So many young people responded to the call to service that in 1511

and religious life of all the French colonies throughout the world.”⁴ Articles 2 and 6 of the Code Noir required that every enslaved person

Instead they attended Mass and the Catechism that allowed them to adopt the principles of the Catholic Church. This also gave them a place to secretly practice their own religions.

The Code Noir allowed the affranchise – free mulattoes born to interracial French and African couples – the same rights as the French. The affranchis could hold trials (even against the French), travel freely, own property, and become slaveholders. The church even assisted the affranchis in getting an education from French universities. Once the free people of color returned from French universities with an education, many started working towards equality between the Africans and the French.

Even though the Africans had been required to go through baptism and Catholic teachings, they still very much practiced their own tribal religions, including Vodun, which was now making its transition to Vodou with the blending of Vodun and Catholicism. The practice of Vodou was not done overtly in public; at this point, Vodou ceremonies took place at night in order to keep their rituals secret from the French. The transplantation of an African religion into the social and religious climate that existed in Saint-Dominique during the 16th century was the beginnings of a platform from which Vodun could be adapted and Vodou could be formed.

Vodou Practices Borrowed from Catholicism

An example of the coexistence of the two religions is the use of hymns. Hymns are one of the most important aspects of a Vodouist's religion, because it is how they contact the lwas but also their

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Pope Julian II had three bishoprics on Hispaniola and by 1547 Clement VII had made Santo Domingo the seat of ecclesiastical power in the West Indies. However, the tropical heat, disease, difficulty adjusting to the environment and the long distances that had to be covered in order to reach different settlements made it hard on the missionaries to spread Catholicism. During this time the French were fighting to take control of the colony in order to obtain the gold found on the island. The French partially achieved their goal when they were able to get control of the Western part of the island, including Santo Domingo. After the signing of the Treaty of Ryswick on September 20th, 1697, the French gained full control of Santo Domingo, which they renamed as Saint-Domingue. The beginning of the creolization of African, French, and Spanish religions had already begun.

Although the conversion of the people of the New World did not continue quite as zealously, there were still churches. Priests who lived in the settlements kept watch on the Frenchmen and the treatment of their workers. One of the biggest factors that turned the Africans to the Catholic Church was the Code Noir. The Code Noir was a decree originally passed by France's King Louis XIV in 1685 in Paris that “regulated the social, political,

had to be baptized and that each enslaved person's acceptance had to be preceded by an instruction of the Catholic, Apostolic, and Roman faith. There was also the requirement that enslaved people be allowed to participate in the religious ceremonies and holidays recognized by the Catholic Church in Article six:

Article VI. “We enjoin all our subjects, of whatever religion and social status they may be, to observe Sundays and the holidays that are observed by our subjects of the Roman, Catholic, and Apostolic Faith. We forbid them to work, nor make their slaves work, on said days, from midnight until the following midnight. They shall neither cultivate the earth, manufacture sugar, nor perform any other work, at the risk of a fine and an arbitrary punishment against the masters, and of confiscation by our officers of as much sugar worked by said slaves before being caught.”⁵

This gave the Africans a notable amount of time away from the grueling work of plantation life.

4 Desmangles, Leslie G  rald. *The Faces Of The Gods : Vodou And Roman Catholicism In Haiti*. Chapel Hill, N.C.: University of North Carolina Press, 1992. eBook Collection (EBSCOhost). Web. 1 Nov. 2015.

5 Ekberg, Carl J., Grady W. Kilman, and Pierre Lebeau. *Code Noir: The Colonial Slave Laws of French Mid-America*. Naperville, IL: Center for French Colonial Studies, 2005. Print.

way of becoming a god by way of possession. One of the most important public prayers in Vodou is the litany Djo or Priye Ginan (prayer for Guinea). The Priye Ginan is sung to open or start a ceremony. It is also known as the Prayer for Africa, and is very powerful in the Vodou community. The litany consists of five sections. During the first section of litany, Djo, the Catholic prayers are sung by a houngan, Vodou priest. The priest has to either be well versed in the Catholic liturgy or be an actual Catholic priest. The Catholic prayers must be sung in French. Some of the prayers that are commonly used are the Hail Mary, the Lord's Prayer, and the Apostles' Creed, although many more can be used as well. After this section is done they continue with the Vodou ceremony and call upon the lwa for which the ceremony was hosted.

The church was used as a tool for colonization, maintenance of the slave plantation economy, and a way to spread Catholicism. However, Catholicism was another framework in which the enslaved people were able to practice their own African religions. The slaves would often be caught stealing objects from the church, and using it in their own religious rituals. They also began to use baptism as a purification ritual and would go to the church asking the priest to baptize them if they became ill.

Vodou also had a strong impact on Catholicism with its presence in Haiti. Within Catholicism there was a combination of the saints and lwas used in Vodou. Each Catholic Saint has a corresponding lwa. For almost every saint, you see within the spirits. The African people were able to impart their own spirits into the confines of Catholicism by transforming certain African lwa

into Saints that did not exist prior to the introduction of the Africans to Catholicism. The introduction of Catholicism into African spaces allowed them to modify it in a way that they were also able to keep and preserve traditional religious culture during slavery. Within the boundaries of Catholicism the slaves had a safe haven and even became an advocate for the emancipation and the dignity of African lives.

Catholicism in New Orleans Vodou

In New Orleans it is important to note that African and Haitian peoples who were enticed to learn about Catholicism used the religion as a platform to practice their own religion, just as Africans in Haiti did. They were able to compare the religion that was being introduced to them to their own religion

This may be because Louisiana was not a fully developed colony yet, which allowed for the formation and growth of the African community.

The Embargo Act of 1808 ended the importation of enslaved people from outside North America to Louisiana. As a result, local colonists and authority figures promoted the growth of the enslaved population by lawfully prohibiting the separation of families. Parents were sold together with their children if they were less than fourteen years of age. The intense, oppressive state of slavery in New Orleans, as well as the high mortality rate, united Africans and Haitians and allowed for the creation of a community-like atmosphere. Without the division of the enslaved community, a "coherent, functional, well integrated, autonomous, and self-confident slave community"⁶

"Vodou is defined as the folk religion created by a merge of indigenous African religions, specifically from the Fon, Yoruba, and Ewe people of West Africa, and its cultural assimilation and syncretism with a foreign culture."

and syncretize them in a way that brought about Louisiana Vodou.

Another thing that is important to note about New Orleans or Louisiana Vodou is that it is not only a result of the Vodou that was brought from Haiti; Louisiana Vodou took a different turn from Haitian Vodou because of the direct migration of many enslaved people to New Orleans directly from West Africa.

Despite the persistence to stomp out the "evil, heathen" religions of Africa that existed within communities of color, the white colonists were never able to fully extinguish the practice of Vodou.

was formed, and "as a result African culture and spirituality did not die out, but rather thrived in French Creole culture."⁷

This created an environment similar to the lakou culture that formed in Haiti after the Haitian Revolution, which allowed for close-knit, family-like group to form. This environment allowed for the spread

⁶ Murphy, Joseph M., "Haitian Vodou". *Creole Religions of the Caribbean: An Introduction from Vodou and Santeria to Obeah and Espiritismo*. NYU Press, 2011. 116–154. Web...

⁷ Murphy, Joseph M., "Haitian Vodou". *Creole Religions of the Caribbean: An Introduction from Vodou and Santeria to Obeah and Espiritismo*.

and growth of religion, culture and music. Vodou was instrumental in the creation of Louisiana culture. In fact, one of the most infamous Vodou queens Laura Hunter, otherwise known as Lala, raised Jelly Roll Morton, an American ragtime and early jazz pianist, bandleader and composer, who started her career in New Orleans. In the late 1970's Irma Thomas, a famous New Orleans singer, recorded a song titled "Princess Lala" that was based on Lala herself, with some relatively accurate Vodou practices described in the lyrics. Vodou queens had a huge influence on society in New Orleans, and some, such as Marie Laveau and Lala, are still very well known to this day. The roots of Vodou are deep in New Orleans, and although it has been commercialized and mythicized, the true Vodou still exists in New Orleans.

Vodou and Slavery

The existence of slavery and/or some kind of oppression can be found in each city Vodou is formed within. Slavery was essential to the creation of Vodou because it forced the union of different tribes taken from Africa and the syncretization of different cultures and religions that

Spanish as enslaved people. The Fon eventually conglomerated and created the empire of Dahomey to refute the people of Yoruba. After the Fon built their empire, they became strong enough to pillage other villages and take their villagers to sell to the French and Spanish as enslaved peoples, the way it had been done to them. This demonstrates how much these two tribes fostered a hatred for one another.

The Creole colonist Mederic Moreau de Saint-Mery documented the different tribes that he noticed: Senegalese, Wolofs, Foulbe, Bambara, Quiambas, Aradas, Minas, Caplaus, Fons, Maho, Nago, Mayomber, Mondongues, Angolese, and many other tribes were enslaved on the plantations. With this many different tribes and cultures, it would have taken something incredibly strong to force them to unite. The horrible conditions of slavery did just that. Slavery was a reason for the union of the various tribes of enslaved Africans brought to Haiti, and the enslaved people used slavery as a tool to further their culture and agenda. Pierre de Vassierre, a French paleographer and historian who took up residence in Saint Domingue in the 17th and 18th century, described

religious beliefs.⁸

Saint-Domingue: French slavery

There were around 500,000 enslaved people on the island of Saint Domingue from the 17th century to 1793. In order to "control" their enslaved population the French government created the Code Noir, mentioned earlier in reference to Articles 2 and 6, requiring that all enslaved people be taught the Catholic faith. However, the Code Noir's main purpose was to dictate the enslaved peoples' activities, treatment, and punishments. The Code Noir was particularly strict on the practicing of any other religion besides Catholicism; for example, Article 1 bans all Jews from living on the island. Other articles detail that enslaved people were at risk of corporal punishment if caught gathering together during either the day or night. However, the enslaved people still found ways to use the institution of slavery to transfer messages, including religious or rebellion meeting times.

There were three social classes for people of African descent on the island: free black people, the enslaved black people, and the maroons, who were enslaved people who ran away far into the Haitian mountains to live off of subsistence farming. The free black people included the *gens du couleur*, who were half French and half African; most *gens du couleur* had an African mother and a French father. Even though they were free, with the right to own property and slaves, have an education, and even travel to France, the *gens du couleur* still lived on the fringe of society.

"Slavery was essential to the creation of Vodou because it forced the union of different tribes taken from Africa and the syncretization of different cultures and religions that produced Vodou."

produced Vodou. In the beginning of this text, the origins of Vodun in West Africa with the Fon people were discussed. The Fon had a patronage to the Yoruba people of Oyo. The Yoruba would raid the villages of the Fon people and take villagers to give to the French and

the Africans participating in communal hoeing and timing the strike of their hoes to the rhythm of African songs. African culture could also still be seen in the Africans' way of life: the preparation of their food, their burial rites and rituals, their outlook on life and death, and their

⁸ Vaissière, Pierre De. *Messieurs De Joyeuse: 1560-1615*. Paris: Albin Michel, 1926. Print.

New Orleans: American Slavery

New Orleans was a fragile, new colony during the time of the Haitian Revolution, when there was a huge influx of Haitian refugees and slaves to North America. The United States had only acquired Louisiana in 1803, not nearly enough time to prepare for the influx of refugees that came in 1809. The migration brought 2,371 white people, 3,102 free people of African descent, and around 3,226 enslaved refugees to the city, essentially doubling the population of New Orleans at the time. With such a rapid increase in population, there were cracks in the system of slavery that allowed the African and Vodou culture to flourish.

The United States government was afraid of having a slave insurrection similar to the one that occurred in Haiti and enacted a law that prohibited the importation of slaves on March 2, 1807. The enactment of this law agreed with the general movement of the abolishment of slavery, but a substantial reason for its enactment was also the fear that what happened in Haiti could happen in America. As a result of the decrease of enslaved people coming America, the authorities began to try to increase the population of the enslaved people by keeping families together. However, this was only customary in certain states, and slaveholders were not punished if they chose to separate enslaved families.

Even so, the times were changing: the number of abolitionists was growing and there were gradually more laws protecting the enslaved people's rights. The time of slavery was slowly coming to an end. In a number of states, laws were enacted penalizing certain forms of cruelty

to slaves; however, these were rarely enforceable, owing to the principle universally held in the slave states that the testimony of a slave could not be employed as evidence. Local custom was practically the only force mitigating the rigors of the institution; among certain classes of slaveholders there was a disposition to avoid the separation of slave families and to grant certain other limited rights to their slaves.⁹

Conditions and Details of Slavery that Led Slaves to Rebellion

The living conditions were extremely harsh on enslaved Africans. They produced tobacco, manioc, cotton, indigo, and sugar cane. All enslaved Africans, both men and women, were to work on the plantation, including pregnant women. The creation of indigo dye was particularly dangerous to slaves as it was easy to be injured dealing with the chemical process that produce the dye. The production of sugar cane was labor intensive, not only forcing the need for more workers, but also requiring more hours of work from each of them in order to meet the increasing quota. The only slaves allowed to do lighter work were women in their seventh and eighth months of pregnancy, women who were nursing or taking care of children, and the elderly, all of whom were protected under the Code Noir.

After the French took over the colony of Haiti in 1625, the conditions of slavery were said to have devolved. One of the articles in the Code Noir dictated that if an enslaved person tried to run away, his ears would be cut off and he

would be branded with the *fleur de lys* on one shoulder. It was a brand that symbolized the French empire and marked what they considered to be theirs. The second time a runaway was caught, they would cut his hamstring and would brand him again on the other shoulder with the *fleur de lys*. The third time a slave tried to run away, the penalty was death.

The enslaved people were treated as tools and property. The plantation owners had little to no consideration of the slaves' well being and concerned themselves only with the profit they could bring. The average



life expectancy of an enslaved African during this time was around 21 years old because of the harsh conditions they were put through on a daily basis. A large percentage of French plantation owners did not adequately feed their slaves, despite the fact that their average workday started at 5 A.M. and ended late in the night when it became too dark for them to carry out production of the crops. The slaves were used for their labor and essentially thrown away if they were no longer able to carry out their duty. Many of the enslaved women were forced to be concubines.

In addition, the Haitian society rejected the notion of free black

⁹ Colby, Frank Moore, and George Sandeman. "Slaves and the Slave Trade." <i>Nelson's Encyclopaedia; Everybody's Book of Reference ..</i> New York: Thomas Nelson, 1907. 250-51. Print.

people. Although they were allowed most rights of any other citizen, there was an obvious distaste for them within society. Free black people still lived in a society that thrived off of white supremacy, and they knew their existence in white society was tolerated at best. They longed for true freedom. With the start of the French Revolution in 1789, black people got the inspiration they needed to start their own revolution.

The Haitian Revolution and the Migration to the New World

The Haitian Revolution continued on the wave of social liberation after being energized by the news of the French Revolution. Word of the revolution spread like wildfire all throughout the Haitian colony. The call for “liberty, equality, and fraternity” in France inspired and incited many slaves to take action of their own.

One of the people inspired was the houngan, Dutty Boukman. Boukman was a maroon (a black slave who ran away far into the Haitian mountains to live off of subsistence farming) with a large stature and commanding presence. He called for a Vodou ceremony to take place in Bois Cayman to address the need for freedom, revolution, and revenge. Boukman led the ceremony that took place on August 14th in 1791; it involved Vodou rites and the offering of a boar as a sacrifice. Bois Cayman was in the north plains of Haiti, and all of the enslaved people from neighboring plantations were said to be in attendance. Boukman spoke to the slaves about liberation from their oppression and gave them hope with the promise of the support of the lwa. Calling upon the spirits

of Africa to free them from their current state, he stood in front of the congregation of people and recited this prayer, which exemplified the spirit of rebellion brewing in Haiti:

The god who created the sun which gives us light, who rouses the waves and rules the storm, though hidden in the clouds, he watches us. He sees all that the white man does. The god of the white man inspires him with crime, but our god calls upon us to do good works. Our god who is good to us orders us to revenge our wrongs. He will direct our arms and aid us. Throw away the symbol of the god of the whites who has so often caused us to weep, and listen to the voice of liberty, which speaks in the hearts of us all.

This powerful prayer to the lwa inspired the enslaved people; it was no longer just them fighting their oppressors, but the lwa of Africa as well. Vodou played an important role as a catalyst for the uprising of the slaves in Haiti. Unlike other religions where the God can be with you or helping you, in Vodou the God is inside of you and takes possession of you. For all intents and purposes you are a God – and if you are a God, who can stop you?

Dutty Boukman was killed in November of 1791. His head was displayed by the French to the slaves in hopes of derailing the agenda of the slave rebellion. However, it had the opposite effect, only serving as fuel for the fire of the revolution. Many of the French did not believe the enslaved people were capable of carrying out a successful rebellion, and also heavily overestimated the capabilities of the French military. At the same time they underestimated the intelligence, motivation, and power of the slaves. At the time,

there were twenty Haitian slaves to every one French citizen. As they needed a large number of workers for the production of the sugarcane, the French imported a large number of enslaved Africans to Haiti in order to be able to meet the growing demand. However, this greed, and self-interest allowed the enslaved people to rise up and join together, while the French were incapable of defending themselves.

The Bois Cayman ceremony sparked several rebellions along the north plains of Haiti. One of these rebellions, now known as the “Night of Fire,” occurred on August 22nd, 1791. During the night, an estimated 50,000 slaves came together with machetes and scythes, determined to take action in to their own hands and liberate themselves. They killed plantation owners and burned houses, barns, and crops. Toussaint Louverture, soon to be a key player in the Haitian Revolution, was able to see the fire from his plantation because of its immensity. The power of the rebellion affected him so much that he decided to join the rebellion, despite his status as a free black man. After the “Night of Fire,” he sent his wife, two children, and his former master’s family away and joined the slave rebellion as a doctor. As his military prowess grew, Louverture was promoted to the rank of general.

Toussaint Louverture, born François Dominique Toussaint Bréda in 1743, was the son of Gaou-Ginou, who was rumored to have been the Chief of the Arada tribe from Dahomey. It is possible that his father was the reason for his advanced knowledge and understanding of militias, as well as his ability to speak some Aradas. However, Louverture gained a lot of his knowledge from his godfather, an

educated slave named Pierre Baptiste Simon. Pierre Baptiste Simon played a vital role in raising Louverture, teaching him how to read and write in French and Latin and teaching him how to use herbs for healing.

The rebellion's leadership was weak when Louverture joined it. Although he was adept at his position as a doctor, he was also aware that the rebellion would fail if it continued as it was. He began to advise the general Jean Jacques Dessalines, telling him that if the troops continued to burn the crops and fight with the intention of revenge alone, then the rebellion would not be able to sustain itself or battle the French troops. This advice is what allowed him to be promoted to general and clear the path for Haitian independence.

In 1802, Napoléon Bonaparte sent 20,000 troops to Haiti to end the revolution. Louverture fought brilliantly, causing Napoléon to commit another 40,000 before Louverture would surrender. He was promised that he would be allowed to retire and live a civilian life. However, he was betrayed and taken to a prison in the French Alps, where he died in 1803. The French believed that by betraying and capturing Louverture, they had defeated the rebellion. Before his death, Louverture left them a powerful message: *"In overthrowing me, you have done no more than cut down the trunk of the tree of the black liberty in St. Domingue – it will spring back from the roots, for they are numerous and deep."*¹⁰ This statement would be proven true when his former general, Jean Jacques Dessalines, would go on to win independence for Haiti officially on January 1, 1804.

¹⁰ L'Overture, Toussaint. "Toussaint Louverture Historical Society, Inc." *Toussaint Louverture Historical Society, Inc.* N.p., 2001. Web. 21 Nov. 2015.

The Role of Vodou in the Revolution, and How it Evolved After Haitian Independence

Although it was well known that Toussaint was a devout Roman Catholic and was not an openly avid supporter of Vodou, the name Louverture means "the opener of the gate" which could be a reference to Papa Legba, the gateway keeper. However, the name could have also been given to him by the French because of his ability to discern breaches in the French army's military strategies and defense.

Regardless, Vodou was quintessential to sparking the Haitian Revolution and would continue to be a part of Haitian culture, despite the fact that Louverture tried to suppress the Vodou practice during his time as general. After Haiti's independence, the newly freed were each given a plot of land that could be shared with a family. This was conducive

acquiring Louisiana there was a large amount of Haitian immigrants living in New Orleans. The introduction of Haitian Vodou, along with Congolese and Angolese religions, resulted in a melting pot of culture, rituals, and beliefs.

Conclusion

The very factors that defined and helped form Vodou are the reasons why the religion has been so misrepresented in today's media and society. There were numerous red flags raised when Vodou was introduced to Haiti and New Orleans, including the syncretization of Catholicism with Vodun, the empowerment of the rituals, and the African serviteurs. Today, it is still misrepresented because of society's unwillingness to acknowledge the relevance and importance of a "heathen" religion. Instead, society tends to choose an aspect that is unflattering to the religion and publicize it. Although

"The very factors that defined and helped form Vodou are the reasons why the religion has been so misrepresented in today's media and society."

for the formation of lakou culture and community, an environment where families could come together and worship the lwa together. Vodou spread out and grew with each new generation of children raised in the lakou communities.

As a result of French control of Louisiana, Vodou was already a part of its culture before America purchased the land. When the Louisiana Purchase was made in 1803, President Thomas Jefferson attempted to redesign the culture of Louisiana and integrate American culture into the vast new territory. However, within six years of

there is evidence that Vodun, or a predecessor of it, has been around at least as long as Christianity, people still seem to believe that Vodou is a "quack" religion. However, this religion is very real and has historical relevance. This religion was able to create social revolutions and influence major decisions in Haiti, France, and the United States of America. It is a unique religion that should be recognized for its contributions to society rather than known as some sort of evil mysticism.

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Understanding The Implications Of An Integrative Medical Model In Healthcare

By: Prescott Osuchukwu

The reductionist model that has remained a dominant approach in Western medicine has come under scrutiny due to the emerging challenges facing healthcare. Recent revelations that show the declining quality of healthcare has caused angst among many Americans. Without a shift in paradigm, the lack of an adaptive healthcare system will continue to pose a threat to controlling cost, enhancing quality and expanding access. The reductionist model ought to be receptive while cognizant of new approaches. With the growing need for patient-centered care, the integrative medical model as considered is a compliment to the current system. With this alternative in mind, a closer look at traditional medical education may begin the changes needed for an inclusive integrative approach to healthcare.

With the breakthrough of medical advances in technology, many would agree that our healthcare system is stable. Despite this common misconception, further analysis reveals the inconsistency of our current model in overcoming the emerging complex challenges of maintaining health. Much of the inconsistencies in healthcare are attributed to our over-dependence on the reductionist approach. The reductionist biomedical model that has dominated North America for the past two hundred years has adopted the premise that caregivers are to treat specific illnesses, diseases, or conditions suffered by a patient. This approach aims to explain diseases by reducing them down to their simplest explanations. This reductionist approach also reinforces the idea of dualism, the view that the mind and body are separate entities (Micozzi, 2001, p.203-204).

Physicians were attempting to investigate the causes of diseases as early as the 1700's. It was not until the late nineteenth century that German physician Rudolf Virchow postulated that diseases were due to specific cells in human tissue (Micozzi, 2001, p. 51). By the end of the nineteenth century, allopathic doctors who received their medical education under the reductionist biomedical framework had a strong belief that thoughts, feelings, and emotions played no role in healing (Micozzi, 2001, p. 204). This approach to medicine became the dominant view for the greater part of the twentieth century.

During the 1970's, the limitations of the biomedical model gave rise to four new major initiatives: the wellness, holistic, mind-body, and alternative therapies movements (Micozzi, 2001 p. 60). These

initiatives challenged the status quo but received little support as they were met with resistance from traditionalists. As alternative ideas continued to expand, the notion of personal empowerment grew. People became more responsible for their own health and wellness. This shift of culture allowed for the integrative medical model to redefine and recreate itself. Unlike its predecessor, the integrative medical model acknowledges the connection between mind and body. This view takes a holistic approach to healing, rather than the traditional oversimplified model. Although many of the initiatives failed to integrate to the traditional model during its inception, its fundamental values have continued to influence our healthcare delivery system to this day.

Despite the progress of integrative medicine, the reductionist biomedical model remains the dominant approach in medicine (Glynn & Scully, 2010, p. 2). However, efforts to step away from traditional norms have progressed. Most notably are efforts to increase government involvement with the advent of the Patient Protection and Affordable Care Act of 2010. This law emphasizes a need for patient-centered care, which is aligned with the ideals of integrative medicine. This then begs the question: in what ways can integrative medicine (IM), including the use of alternative medicinal approaches (CAM), compliment traditional Western medicine to encourage patient-centered care? This article attempts to answer the posed question as well as weigh the implications of hostility towards the integrative medical model in today's healthcare system.

Due to the common misuse, it is important to distinguish the

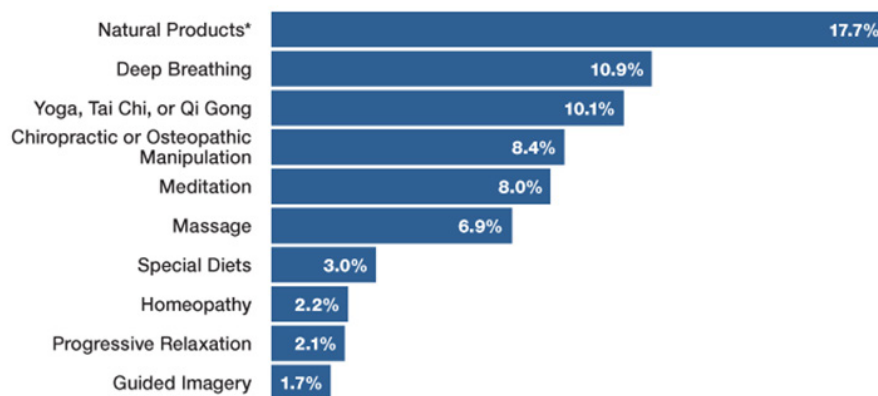
terms CAM and IM. The National Center for Complementary and Integrative Health (NCCIH) defines Complementary and Alternative Medicine (CAM) as “a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine” (NCCIH, 2011, para 4). In doing so, the NCCIH identifies common forms of CAM and categorizes them into two subgroups: mind and body practices, and natural products (NCCIH, 2011, para 4). Natural products such as dietary supplements other than vitamins were found to be the most popular complimentary health approach used, with 17.7% of American adults using this form of CAM. The second subgroup of CAM is body practices. Body practices refer to a broad category

other types of CAM methods that the NCCIH recognizes (see Figure below).

It is important to understand why the distinction between IM and CAM exists. Whereas integrative medicine is a combination of both conventional and unconventional approaches to patient care, alternative medicine is used in place of conventional medical treatment. IM is more comprehensive because “it centers on the importance of the practitioner-patient relationship, the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches...to achieve optimal health and healing” (OCIM, 2012, para 2).

In contrast, such an inclusive model has added benefit in the arena of health. Snyderman and

10 most common complementary health approaches among adults—2012



*Dietary supplements other than vitamins and minerals.

Source: Clarke TC, Black LI, Stussman BJ, Barnes PM, Nahin RL. Trends in the use of complementary health approaches among adults—United States, 2002–2012. National health statistics reports, no 79. Hyattsville, MD: National Center for Health Statistics; 2015.

of therapeutic treatment and medicine. The NCCIH recognizes yoga, chiropractic and osteopathic manipulation, meditation, and massage therapy as common mind and body practices used by American adults. There are several

Weil (2002) illustrate the limitations of the reductionist approach best in their article, “Integrative Medicine: Bringing Medicine Back to Its Roots.” They state that the “single-minded focus on the pathophysiological basis of disease

has led much of mainstream American medicine to turn its back on many complex clinical conditions that are neither well understood in mechanistic terms nor effectively treated by conventional therapies” (Snyderman & Weil, 2002, p.4). Their position suggests that our current approach is necessary but insufficient to the complexities of health in the 21st century. With the absence of an effective treatment to a medical condition, patients are left with very few options. The inadequacy of the current conventional approach may not only be dissatisfying for potential patients, but it has led to the widespread use of CAM by Americans.

According to a National Health Interview Survey, 33% of adults use a form of CAM. The survey also found that 12% of children aged 4 to 17 used some form of CAM as a method of treatment (Clarke et al., 2015). Despite the growing CAM industry, there are both tangible and intangible outcomes to its use. A hostile climate exists in which patients do not feel the need to disclose their CAM use to their primary care doctor. There are many reasons why this could be happening, such as the physician’s potential ignorance of CAM, patients not being asked of current therapies taken, or patients do not feel comfortable disclosing the information out of fear of a negative response (Robinson & Mcgrail, 2004, para 1). A major implication is nondisclosure of relevant health information and undermining of trust.

For patient-centered care to flourish, trust must be sustained between the individual and his healer. Trust in and of itself has profound impacts on relationships between patients and caregivers.

Such implications include whether or not a patient accepts a particular recommendation, the patient’s adherence to said recommendations, and the overall satisfaction with any recommendations and medical care received (Brennan et al., 2013). The need for mutual trust in any

and treatment could carry potential health risks. These findings are arduous to substantiate because the biomedical model assumes all individuals are the same. Furthermore, the lack of adequate research on CAM use presents a practical barrier for physicians to

“Our current approach is necessary but insufficient to the complexities of health in the 21st century.”

doctor-patient relationship becomes a factor in the healing process for a patient, especially when withholding necessary information becomes commonplace. In the world of a reductionist healthcare system, trust becomes an intangible construct. Although patients are expected to believe in their doctor’s ability to “heal” them, Snyderman and Weil (2002) remind us that such a thought becomes unreasonable if a healthy relationship is non-existent. The need to integrate the values of holism into the biomedical model may probably be the first step to patching the relationship between individuals and their caregivers. The relationship between the healer and the healed should be one based on self-awareness because it promotes honest, open, and trusting communication. Additionally, the quality of human interaction between the healer and healed can also help in the healing process itself (Micozzi, 2001 p. 62).

There are a number of reasons doctors are frequently distrustful of CAM. As discussed earlier, the traditionalist culture during the 19th century largely influenced our epistemic view of medicine up to this day. Moreover, as individuals began to take a closer look, it was found that some alternative or unconventional forms of medicine

encourage it or recommend it as an option for their potential patients.

There is evidence indicating that several forms of CAM have had negative effects on patient health. Although these cases are minute in comparison to conventional medicine, it is still important to note the risks that are associated in the absence of a reductionist approach. The American Aging Association conducted a study that systematically analyzed the adverse effects of unconventional therapies among the elderly. The therapies reviewed included acupuncture, herbal remedies, and spinal manipulation on the elderly. Their research found that contamination osteoporosis was suspected to be an adverse effect of chiropractic spinal manipulation (Ernst, 2002).

With the growing popularity of CAM use, an obligation to ensure its effectiveness must follow suit. Current research on CAM can aid doctors and caregivers in making the right medical decision. Despite the arduous nature of clinical research, some alternative medical approaches have led to positive clinical outcomes. A study found that the use of homeopathic remedies were effective when compared to conventional treatments administered to patients with rheumatoid arthritis (Micozzi, 2001,

p.95). Furthermore, participants who received homeopathic remedies saw improved conditions and physicians noted reduced interaction time with patients. However, no matter the outcomes, some physicians may still advise against CAM. A probable reason for this caution may be that for the past two hundred years physicians have predominantly trained to practice in a reductionist framework. This approach may increase the potential for poor clinical outcomes and undermine the push for patient-centered care.

Likewise, uninformed medical decisions, compounded with poor clinical outcomes, will prolong future health care challenges of improving quality, reducing costs, and expanding access to care. If doctors are unaware that their patients are using CAM in conjunction with or separate from their prescriptive treatment plan, the practitioner will have no basis for making their best medical decision. In this new world of healthcare, where performance is tied to reimbursement, this situation creates an unmet expectation of care that is magnified if the patient's condition worsens.

In the age of patient-centered care, a physician should have knowledge of CAM approaches. One study argues that the use of CAM therapies can provide medical practitioners with insights on a patient's values, lifestyle, health beliefs and other issues which may assist the medical practitioners to provide optimum care (Robinson & Mcgrail, 2004, p.90-98). For the successful integration of CAM practices with current conventional approaches, patients should not feel the need to withhold information from their doctors. Conversely,

doctors should have sufficient knowledge on potential CAM approaches and be willing to develop a relationship with their patients.

One predictor of poor clinical outcomes is the lack of competence. The implication of hostility towards CAM poses a barrier to "access to health care" because a number of physicians may not be insufficiently well informed in patient centered care. This is not to discount the need for specialists, but it raises the question of the level of competence required to address the complexities of emerging diseases, and chronic health conditions. Access to healthcare involves not just a measure of supply, but depends on accessibility and acceptability of services (Gulliford et al., 2002, p.1). The failure of the practitioners to introduce alternative

care" and feel like they can do more to help their patients:

Physicians simply don't have the time to be what patients want them to be: open- minded, knowledgeable teachers and caregivers who can hear and understand their needs. Physician unhappiness is not only the result of the limitations managed care has placed on their earning capacity. It is also a response to loss of autonomy, loss of fulfilling relationships with patients, and, for some, a sense that they are not truly helping people lead healthier lives (p.5).

Although the feelings expressed above are not the same for all physicians, it is undoubtedly a call for a new approach – an approach to patient care in which physicians play an active role in enhancing the patient's life and not just curing their

"It is undoubtedly a call for a new approach – an approach to patient care in which physicians play an active role in enhancing the patient's life and not just curing their symptoms."

or complimentary methods of treatment is a disservice to the patient and does not align with patient-centered care. Some may argue that the fault lies with the patient. After all, it is the patient's non-disclosure of CAM use that prevents the caregiver from executing their jobs to the fullest potential. However, doctors may not feel comfortable recommending CAM to patients or may not have enough medical knowledge about the field of CAM. As this quote from an article by Snyderman and Weil published in the "Archives of Internal Medicine" illustrates, physicians are discontent with the constraints of "managed

symptoms. This notion demands a paradigm shift in our approach to healthcare delivery.

For the United States to remain competitive, the healthcare system must be adaptive to the changes of the health of populations. As such, it is imperative that future doctors understand the underlying hostility towards CAM and be open to shifting from the traditional reductionist approach. Medical education must deliver not just competency but also the ability to adapt to change, to generate new knowledge, and to improve performance continuously (Fraser & Greenhalgh, 2001, p.

799). This change will require a shift in structure and methods, which has not taken place to date. Moreover, educators must be able to understand and adapt the importance of the integrative medical model and lead the discussion on how to combine proven treatments with possible alternative methods. If both educators and medical students are on the same page, then there will be little chance for a philosophical divide. An article in the *Journal of Health Education* best describes the converse, stating that “if we as a profession fail to become actively engaged [in CAM], others will define our role or exclude us altogether” (Johnson et al., 2010, p. 350-351).

Transforming current education in medicine will not be an easy task. It will require cooperation from both the provider and the patient (Johnson et al., 2010, p. 350-351). This process will take time, and may not be immediately effective across all practices. As more research and data becomes published surrounding the effectiveness of complementary and alternative treatments it is likely that there will be a collective change of attitude towards CAM. The way future doctors and caregivers are trained will be the secret in co-opting the advantages of integrative medicine.

There are no “silver bullets” in solving the issues facing our health care system, and our approaches do need improvement. If we ever are to reduce the rising costs of health care and expand access for those in need of care, we must accept that there are barriers in the way. Structurally, the system of delivery is fragmented and remains subjugated by divisive politics and philosophy. Furthermore, the fundamentals of

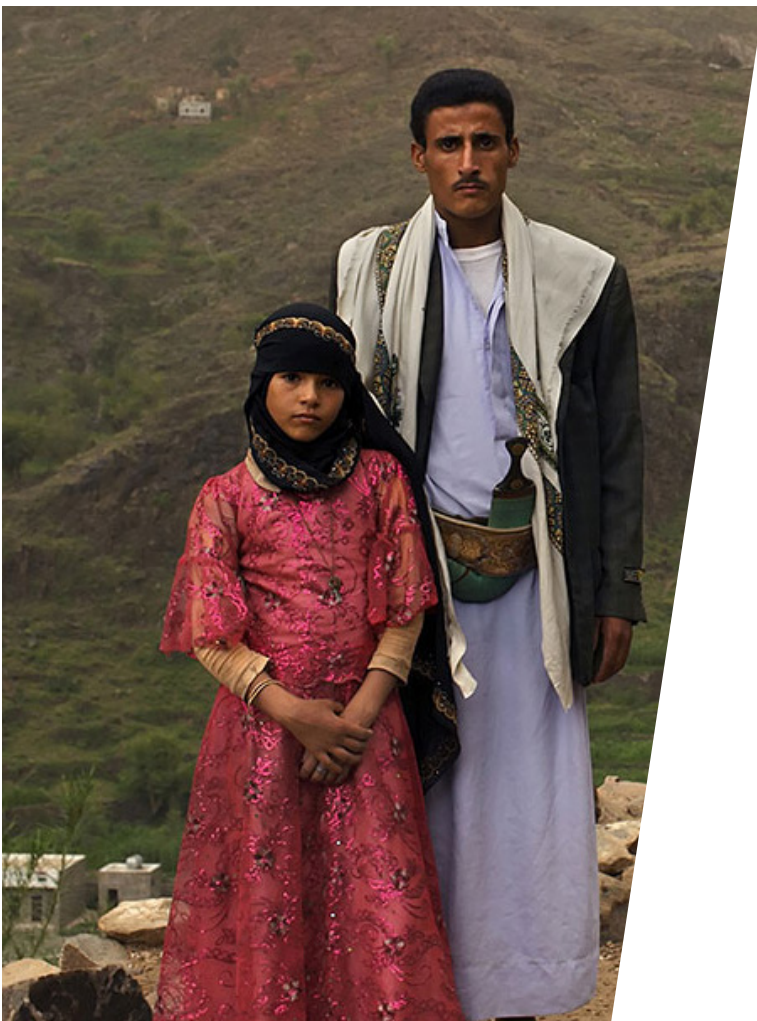
healthcare are not centered around how the care is delivered but what is delivered. An efficient delivery system is one with structure and one that attempts to improve health. Although many alternatives may exist, an integrative medical approach in conjunction with our current methods may be an avenue to patient-centered care.

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Challenges To Female Education In The Developing World International Efforts To Address Those Challenges

"Too Young to Wed" Photographs by Stephanie Sinclair



Females around the world face many challenges to obtaining an education. While there are many studies that document the benefit to female education as well as a few challenges that females face, there is not yet a study that summarizes major challenges to female education, particularly in modernizing countries, and the recent steps of various international organizations and businesses that address these challenges. This thesis helps to fill that void. It uses specific countries in the developing world, namely

Education Id And Address

By: Adam Odomore



Nigeria, Pakistan, India, Nepal, China, Yemen, Uganda, and South Africa, to represent a good cross section of developing countries, which, in turn, highlight a few major problems that females encounter in pursuit of an education. It finds that the challenges to education, while not true of each country, include poverty, religious custom, menstruation, child marriage, war conflicts, patriarchal traditions, and antagonism towards Western education. It then examines the major international responses that address these obstacles to female education.

In particular, it looks at the work of the United Nations with subsidiaries like UNICEF and UNESCO, the World Bank, USAID, the Girl Effect Organization, Malala Fund, and other grass root efforts. It concludes that the solutions to the challenges that females face in getting an education are beginning to show some progress, but that more has to be done, particularly in influencing old cultures through the use of education itself to create new cultures of equality between males and females.

Education is essential to functioning and advancing in the modern world. It is also fundamental to self-awareness, self-identity, and self-development. Without it, mankind is reduced to instinct and the realm of animals. With it, males and females can improve their lives and learn about one another and the world. More specifically, education for females is important because it helps them unlock and develop their potential.¹ Educating females in the developing world has substantial returns and in most cases exceeds the returns on males. According to research by Chaaban and Cunningham, an educated female is a great benefit not just to herself, but to her community.² In addition, recent work from general surveys and sector-specific research reveals that educating females bring about various benefits, including improvement to family health, lower infant mortality rates, greater family wage-earning power, and the intellectual development of the family and, thus the community.³ However, there are challenges to obtaining an education. Some of the challenges that females face in obtaining an education are the same for males, but, in the case of females, the challenges are more onerous and more difficult because of esoteric custom and patriarchal bias.

While such studies by expert organizations, patrons, and policymakers have shown that education for females in the developing world is important and has many benefits associated with education, they have, however, failed to show the many challenges that

females in the developing world face in the process of attaining a formal education. While this paper takes it as a given that education is valuable and worth pursuing and having, its purpose is to study the challenges that females face in obtaining an education in developing countries and to investigate the international efforts to address those challenges. Because of space and time constraints, this paper cannot cover every challenge to female education in developing countries. Instead, it tries to elicit the major challenges by studying problems in a select group of state that are representative of developing nations, a sort of cross-section of modernizing states. It specifically looks at Nigeria, Pakistan, India, Nepal, China, Yemen, Uganda, and South Africa.

Section 1: Poverty

The first major challenge that females in developing countries confront in regards to attaining an education is poverty. Females are a majority of the world population. Surveys show that in 2011, there were 774 million illiterate people in the world, ranging from age fifteen to twenty-four; and that two thirds of these illiterate souls (493 million) are females.⁴ Even though the size of the global illiterate population is shrinking, the female proportion has remained virtually steady at six-three percent to sixty-four percent, with a majority of them in developing nations.⁵

It is difficult for students (male and female) to obtain an education

when they do not have the essential resources, such as pencils, pens, books, desk, computers, electricity, and trained teachers. However, poverty poses a greater threat to females in the developing world in regards to attaining an education. This is because, although females, like males, are born into poverty, females are regulated to a secondary position in the home and the community in developing countries, which are organized as patriarchal societies and dominated by gender biases.⁶ This condition inhibits their participation in many areas of education, which are available even to persons born into poverty. This condition holds true in spite of the fact that studies show the education of females is a way to increase economic development in developing nations.⁷

Poverty, according to the World Bank, is living under \$1.25 a day.⁸ When translated into communities, patriarchal cultures benefit males over females, so that, in effect, while poverty is a shared challenge for both sexes, it proves to be worse for females. This is because males, according to traditional culture, receive an education before females since they are viewed as the breadwinners and are supposed to provide for their families, which includes the females in the persons of wives, daughters, sisters, mothers, and aunts.

Direct fees associated with schooling, such as tuition and books,

1 Mariam Erkin. "Promoting Gender Equality and Empowering Women through Education" (Masters thesis., Texas State University, 2015), 2

2 Ibid. 2

3 Mariam Erkin, "Promoting Gender Equality and Empowering Women through Education," 2

4 See full report at: Friedrich Huebler; Weixin Lu. "Adult and Youth Literacy: National, regional and global trends, 1985-2015." *UNESCO, UIS Information paper*. (June 2013):9, accessed November 17, 2015. <http://www.uis.unesco.org/literacy/Documents/Intl-literacy-day/literacy-infographic-2013-en.pdf>

5 UNESCO. "Adult and Youth Literacy: UIS Fact Sheet 26 (September, 2013), 1, accessed November 17, 2015. <http://www.uis.unesco.org/literacy/Documents/fs26-2013-literacy-en.pdf>

6 See UNICEF "Girls Education Movement South Africa." 2006, p.1 http://www.unicef.org/southafrica/SAF_resources_gembrief.pdf (Accessed October 17, 2015)

7 See Paul T. Schultz "Why Governments Should Invest More to Educate Girls," *World Development*, 30, no 2, (2002): 215-217.

8 That is the threshold of the poverty line. See statistics of The World Bank at "Statistics used in girl rising." Pearson Foundation. 2008a. http://girlrising.pearsonfoundation.org/downloads/GR_Curriculum_Resources_STATISTICS.pdf?pdf=GR_Curriculum_Resources_STATISTICS (Accessed October 18, 2015).

can consume about five to ten percent of the income of a middle-class family household and twenty to thirty percent of the income of a household in poverty. The expense is often seen as an unnecessary expense for females when other basic needs are yet to be met.⁹ In addition, indirect fees, such as supplementary parent-teacher fees or bursar fees, add up to a considerable amount and put a strain on the income of a poor household. Then there is the indirect cost of transportation, clothing, food, as well as the opportunity cost of sending a female child to school instead of her working to earn money that might support the family.¹⁰

At the end of the day when all of these fees and costs are levied on a poor household with several children, often times the females are left at home while their brothers attend school, and thus miss a fundamental part of life's development. Ironically, many studies show that educating females is the way to eradicate poverty. In addition, the promotion of educational equality between males and females in all age groups may improve the condition of families and communities. According to the Organization for Economic Co-operation and Development (OECD), females are more likely than males to invest a higher proportion of their earnings in their families and communities.¹¹ According to another study, they invest ten to twenty times more

income back into the family and community than a man does.¹²

Equal education also boosts economic growth for females. Education not only helps females to escape poverty by developing the skills they need to improve their livelihoods, but it also generates productivity gains that boost economic growth substantially. According to Chaaban and Cunningham, a female with an extra year of education can earn twenty percent more income as an adult, and if all females were given an additional year of education, they will add more than twenty-five percent to the GDP of a country.¹³ When females are sent to school, they improve their job opportunities, which further enhances their chance of escaping poverty. Educated females are more likely not just to be employed, but also to hold jobs that are secure and provide good working conditions and decent pay. Educated females lift households out of poverty permanently, and education guards against them falling – or falling back – into poverty. In a household where the father dies unexpectedly, an educated mother can find work and maintain the family. Even if a wife decides not to work and is economically sufficient, education would be helpful to her in order to survive or invest wisely.

The advantage of educating females can be illustrated in the story a girl named Dai Manju. She is featured in a book called *Half the Sky* by Nicholas Kristof and Sheryl

WuDunn.¹⁴ Dai is from China where she lived with her family, which consisted of her father and mother, her two brothers, and a

“An educated female is a great benefit not just to herself, but to her community.”

great-aunt. Her family was very poor to the point that they could not afford to buy meat for the Chinese New Year. In addition, her parents were elementary school dropouts who did not see the point of sending a girl to school, and they believed that Dai would spend her days tilling farmlands and darning socks. The school tuition, which was thirteen dollars a year for elementary school, almost seemed like a bad investment to a family that had other fundamental needs. Therefore, in the sixth grade, she was ordered to drop out of school.

The above story is reality for millions of girls worldwide. Statistics show that girls have a one in four chance of being born in poverty worldwide.¹⁵ However, Dai Manju's story had a happy ending. With the financial help of Kristof and WuDunn, she was plucked from poverty and obtained an education. She, just like many other females who were given an education, became a force for change in her society. After Dai Manju received an education, she worked as an accountant for local

9 Barbara Hertz. “What Hinders Girl's Education.” *EJournal USA*. U.S State Department/Bureau of International Programs. 15, no.2 (June, 2011), 8

10 See Pauline Rose and Ramya Subrahmanian. “Evaluation of DFID Development Assistance: Gender Equality and Women's Empowerment Phase II Thematic Evaluation: Education.” *Department of International Development*. (March, 2005): 8. http://www.ungei.org/resources/files/dfid_wp11.pdf (Accessed October 18, 2015).

11 See OCED, “Investing in women and girls- the breakthrough strategy for achieving all the MDGs,” 5.

12 International Financial Cooperation, “Job Study- Assessing private sector contribution to job creation and poverty reduction. Findings on gender.” *IFC*. (January, 2013):1. Accessed November 18, 2015. <http://www.ifc.org/wps/wcm/connect/ff6a2e004edd7e8eac13ef3eac88a2f8/full-study-gender.pdf?MOD=AJPERES>

13 Chaaban and Cunningham, “Measuring the Economic Gain of Investing in Girls: The Girl Effect Dividend,” 8, 20-21

14 Nicholas D. Kristoff, and Sheryl WuDunn. *Half the sky, turning oppression into opportunity for women worldwide* (New York, New York: Vintage Books, 2009), 169 (2009, pg.167)

15 See full article, The World Bank. “New Data Show 1.4 Billion Live On Less Than US\$1.25 A Day, But Progress Against Poverty Remains Strong.” 2008, p.1. <http://www.worldbank.org/en/news/press-release/2008/09/16/new-data-show-14-billion-live-less-us125-day-progress-against-poverty-remains-strong>. (Accessed January 30, 2015).

factories, sent money home for the construction of a concrete, six-room house, and paid for the upkeep of her family, which included paying the school fees for her younger siblings. She, along with many other females who were able to obtain an education, was able to secure jobs for friends and families.¹⁶

However, what happens too often in developing countries is that children from poor households, especially females, are subjected to child labor, which is one of the reactions to the symptoms of poverty.¹⁷ Needless to say, when females in developing countries are forced to work, they cannot be enrolled in school. They are engaged in a variety of tough jobs both in rural and urban areas, including baby sitters, sales persons, and sex workers. The females are funneled

to females being held back from attaining an education and, when they do go to school, it interrupts school attendance or any scholastic achievement that would have been possible.²¹ But poverty is just one limitation to education for females in the developing world. There are other challenges, which even females who come from privileged backgrounds encounter.

Section 2: Religious Custom

Another major challenge to female education is cultural discrimination disguised as religion. Despite the many benefits of educating females as listed above, many females are blocked from school and suffer inequalities due to interpretation, often misinterpretation, of religious tenets or the perceptions of such tenets by parents.²² Using Pakistan

the legal system that guides public and, in some cases, private life. It is not based on natural law and is in general opposition to secular law, which is predominant in many Christian and secular societies around the world.²⁴ In many Christian societies where natural law exists, there is a clear separation of church and state; however, in Islamic communities, both secular and religious entities are subject to Sharia law and it is through that lens that many Muslims view education as a whole as well as education for females.

As of the present day (the fall of 2015), thirty-five countries have adopted Sharia law into their civil law including Pakistan.²⁵ This state of affairs has greatly affected the education of female in Pakistan, particularly in rural areas.

Kristof and WuDunn wrote that religion is not to be blamed for many of the discriminations and oppressions that females face, especially in Muslim societies, but that culture should be blamed.²⁶ However, it is difficult to separate religion and culture and to distinguish between mosques and the state when religion and politics are viewed as one. In the development of Islam, the teaching of the Prophet (SAW) and verses of the Qur'an help improve the state

"The lack of emphasis on female education is one of the principal features of gender inequality and low economic development in Pakistan."

into informal sectors where "labor laws are neither monitored nor enforced."¹⁸ In addition, many of the females from rural to urban areas are trafficked and exploited. One example of this abuse is seen in Nigeria, where street hawking is the largest form of child labor and accounts for more than fifty percent of all urban child labor.¹⁹ This demand for female labor is prevalent in societies like Nigeria because females are perceived as "more obedient, hardworking, submissive and trustworthy" than males.²⁰ This situation contributes

as a case study, this section outlines how religious interpretation affects the education of females in developing countries.²³

In Pakistan, a Muslim majority country, Sharia law is the law of the land. Sharia law, which is derived from the Quran and the Hadith, is

²¹ Ibid.

²² Ahmad Kainuwa; Najeemah B. M Yusuf. "Cultural Traditions and Practices of the Parents are Barriers to Girl-Child Education in Zamfara State Nigeria." *International Journal of Science and Research Publication*, 3, Issue 1: (November 2013), 1.

²³ This includes the education of "girl child" which is most prevalent in Muslim societies, including Northern Nigeria and Pakistan. In the definition a term used by Badamasuiy (2012) Girl-Child according to the UNICEF, is a young female person still under the guardianship of a parent or guardian, and subsequently under the age of 18 (134). For more information see: Juwayriya, Badamasuiy, "Girl-child education under the sharia: its relevance to the Muslim community in the Northern Nigeria." *Journal of Research in Peace, Gender and Development* 2, no. 6 (June 2012):132-138

²⁴ See Javaid Rehman. "The sharia, Islamic family laws and international human rights law: Examining the theory and practice of polygamy and talaq." *International Journal of Law, Policy and the Family*, 21(1): 2007, p.109-113.

The term sharia comes from the Arabic language term sharia, which means a body of moral and religious law derived from religious prophecy, as opposed to human legislation;" see more with link: http://referenceworks.brillonline.com/entries/encyclopaedia-of-islam-2/sharia-COM_1040

²⁵ Sarah Glazer. CQ Global Researcher Sharia Controversy v.6-1, (2012), 1. Accessed November 18, 2015 <http://www.cqpress.com/product/CQ-Global-Researcher-Sharia-Controversy.html>

²⁶ Kristoff and WuDunn, *Half the Sky*, 150

¹⁶ Kristoff, and WuDunn, "Half the sky, turning oppression into opportunity for women worldwide," 169

¹⁷ See UNICEF. "Global Initiative on Out-of-School Children, Nigeria Country Study." UNICEF:(March 2012), 41

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

of females.²⁷ Females were given rights to own property, obtain an education, and to choose their husbands. The Prophet (SAW) is said to have written numerous chapters that helped shape civilization and one of those verses dealt with education, including this verse: “the pursuit of knowledge is a duty of every Muslim, man and woman.”²⁸ Those religious words instructed Muslims as a religious duty to pursue knowledge and education and that gender, race, or culture should not prevent people, including females, from attaining an education.

Nonetheless, many of the teachings and laws of the Prophet (SAW) have been misinterpreted through the cultures of some societies and peoples to fit their own goals. It should be noted that this was true of Christianity societies as well; for example, the Jim Crow laws and slavery were justified using Christian morals in the United States. In the case of some Muslim societies, the words of the Prophet (SAW), “Tell believing men that they should lower their gaze and guard their modesty, that will make for greater purity for them and say to the believing women to lower their gaze and guard their modesty and they should not display their beauty and ornament,” were altered and interpreted to mean that females had to wear veils and cover themselves up while the males were free to wear what they wanted.²⁹

In 2013, the Organization of Islamic Cooperation noted that many Islamic member nations restrict education opportunities for females based on local and

tribal traditions, often disguised as religious teachings. It condemned these actions, including the interpretation on the veils, honor killings, child marriages, and female genital mutilation.³⁰ In the case of Pakistan, which has in its constitution that education is a fundamental right to every citizen, there is a huge gender gap in education and it relates in part to misinterpretation of Muslim tenets.

The case of Malala Yousafzai of Pakistan is illustrative. In 2012 was attacked by members of the Taliban for speaking up for education of females, and she is the co-recipient of the 2014 Nobel Peace Prize. She lived in a part Pakistan under the control of the Taliban, who misinterpreted Sharia law to mean that females were mainly to attend religious schools and not attend schools that taught math, science, etc. In Pakistan, it is a huge risk for many females to go to school. When females go to school, they face many barriers, one of which is the risk of being attacked and killed on account of asserting their rights to education, work, and general independence. This was the fate of a group of female university students whose bus was bombed in June 2013 by militants in Quetta, the capital of Pakistan’s southwestern Balochistan province.³¹ The reality is that the lack of an educated female population is a major reason why Pakistan is mired in poverty. The lack of emphasis on female

education is one of the principal features of gender inequality and low economic development in Pakistan.³² Many groups are using religion as a front to block females in developing countries from attaining an education.

Another example of misguided religious interpretation is found in Northern Nigeria. Nigeria is a country with two main religions, Christianity in the South and Islam in the North, with other smaller religions in between. Western education took root in the South because Christian missionaries set up schools there. It did not have roots in the Islamic North and had to make its way to the North. Over time, enrollment in schools in the South was higher compared to enrollment in schools in the North.³³ Muslim elites in the North viewed education as a “radical force” in the South that would prove unruly in the North, so they resisted it. This fear is still true even today. At the heart of the fear is the belief that a lot of people will be converted to Christianity because of its attractiveness, particularly in the realm of education. Muslim parents viewed the Christian mission schools as having the primary goal of converting people. This was true to some extent, as the mission schools wanted to teach people about the Bible, but they also taught arithmetic and sciences, which were aimed at making a better Christian.³⁴

Muslims of the North encouraged mainly religious learning. Muslims

30 Except from Speech by Ambassador Ufuk Gokcen, “Hope and despair for women in Islamic states.” *Organization of Islamic Cooperation*, January 9, 2011, accessed November 18, 2015 <http://www.oicun.org/71/20130508035638010.html>.

31 Harvard Kennedy School’s Shorenstein Center and the Carnegie-Knight Initiative, “Women, girls and Malala: Research on gender and education in Pakistan, and beyond,” *Journalist Resources*. (October 10, 2014), accessed November 18, 2015, <http://journalistsresource.org/studies/international/human-rights/pakistan-women-equality-education-economic-development-research-roundup#>

32 Imran S. Chaudhry and Saeed ur Rahman. “The Impact of Gender Inequality in Education on Rural Poverty in Pakistan: An Empirical Analysis,” *European Journal of Economics, Finance and Administrative Sciences*, Issue 15, 2009. It is important to note here that this does not happen in all of Pakistan but predominantly in rural areas.

33 It is important to note here that unless stated as “religious schools,” any mention of school refers to formal education as it pertains to primary, secondary, college, and university education.

34 Babs A. Fafunwa. 1974. *History of Education in Nigeria*, London George Allen, and Unwin Ltd. p. 71.

27 SWA means Prophet (sallallaahu ‘alayhe wa sallam). This is a name used to describe Muhammad. See more at <http://www.bakkah.net/articles/SAWS.htm>

28 Badamasuiy, “Girl-child education under the sharia: its relevance to the Muslim community in the Northern Nigeria,” 133

29 (Quran, XXIV:30, 31)

saw this education as essential, which was reported by Sonia F. Graham, the author of *Government and Mission Education in Northern Nigeria, 1900–1919*. Today, the same attitudes from the past that prevented Muslim parents from sending their children to school, especially the females, still persist. Religious education, however, does not equip people with the skills needed to fight diseases, to create better and faster ways to communicate, or to help them make decisions that will lead to a better economic outcomes for their sustenance.³⁵ This is what Western education offers.

Muslim parents in Northern Nigeria are reluctant to send females to school and those who go are often withdrawn before completion of their studies. This happens for a number of reasons, including parents' fear that their children will be corrupted and that Western education will "disrupt the Islamic way of life and lead to the preference of the Hausa language."³⁶ According to Kainuwa and Yusuf, these socio-cultural beliefs further contribute to females having inaccessibility to an adequate education.³⁷ Many of these parents have the idea that Western education is occupation driven and therefore not appropriate for their daughters; instead, they are made to attend Islamic schools because they believe their daughters are going to get married and will not need a job that a Western education would provide. In sum, religion itself does not limit education for females in developing nations. Rather, it is a perversion of religions tenets by

35 Sonia F. Graham. 1966. *Government and mission education in Northern Nigeria, 1900–1919*, with special reference to the work of Hanns Vischer xxviii, 192pp., 8 plates. Ibadan: Ibadan University Press. p. 29

36 Ibid. p.132

37 Kainuwa and Yusuf, "Cultural Traditions and Practices of the Parents as Barriers to Girl-Child Education in Zamfara State, Nigeria," 4

societies and people coupled with misinterpretation and false religious perception that restrict female education.

Section 3: Child Marriage Customs

A third challenge to female education in developing nations is child marriage. Child marriages occur in many developing societies around the world and prevent females from obtaining an education. According to the United Nations Population Fund's article "Marrying Too Young: End Child Marriage," one in three females are married before their eighteenth birthday in developing countries (excluding China). In addition, one out of nine will be married before they are fifteen.³⁸ It is also probable that, although child marriages are on the decline among females under age of fifteen, "fifty million females could still be at risk of being married before their fifteenth birthday in this decade."³⁹

The custom of child marriage is present in numerous societies, but it is most predominant in Muslim societies. In places such as in Yemen, the education of females is greatly hindered because of child marriage, and girls are subject to marriage with men two or three times their age. The story of Tahani, the Yemeni girl pictured in the photograph titled "Too Young to Wed" by Stephanie Sinclair, clearly illustrates this situation. She was married at age six to Majad, who at the time was twenty-five. Many females are forced into circumstances such as these, psychological distress. In the case of Tahani, she recalled, "whenever I saw

38 See article UNFPA. "Marrying Too Young End Child Marriage." *The United Nations Population Fund UNFPA*, New York, 2012, p.6 <https://www.unfpa.org/sites/default/files/pub-pdf/MarryingTooYoung.pdf> (Accessed October 21, 2015).

39 Ibid. p.60

him [my husband], I hid. I hated to see him."⁴⁰

There are many females in Northern Nigeria with the same story as Tahani. In Hausaland in Northern Nigeria, child marriage is the rule. In towns, girls and boys marry at the age of twelve, and often at younger ages in the villages. Due to a tradition called *purdah*, which is the seclusion of wives indoors in order to protect her from meeting other men, many of the females in these communities are ordered to stay home, leaving them uneducated.⁴¹ Child marriage is a big barrier to the education of females in developing nations because even if they attend school initially, many drop out to get married at such young ages and "never go back to school, learn a trade, or master vocational skills that would economically empower and make them self-reliant."⁴² Such is the case of the two young females pictured in the second photograph included by Stephanie Sinclair.⁴³

Sometimes, when females are engaged at an older age, they are immediately pulled out of school.⁴⁴ In some countries, parents sell the daughters to be married in exchange for money due to poverty. They fail to recognize that that marriage is a matter of one

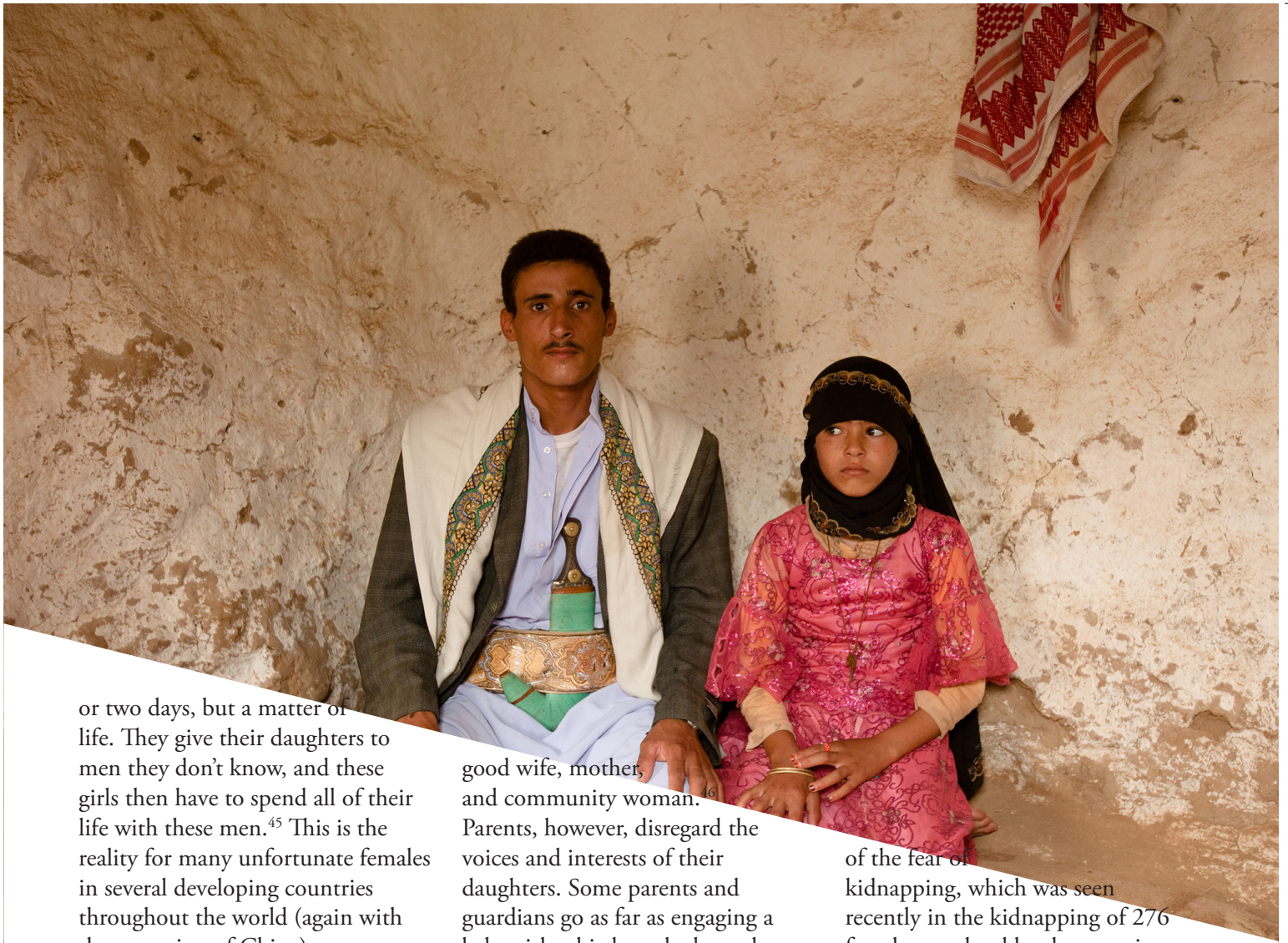
40 See Rena Silverman, "Millions of You Girls Forced Into Marriage," *National Geographic News* article on March 15, 2013 <http://news.nationalgeographic.com/news/2013/13/13/13/brides-marriage-women-sinclair-photography/>

41 See A. SALIM, *Women's education* unpublished thesis, Zaria, Ahmadu Bello 1977.

42 See AHI (Action Health Incorporated) "Insights into Early Marriage and Girl Northern Nigeria." Action Health Incorporated, Nigeria, 2011.

43 To see full article follow the link: See Rena Silverman, "Millions of Young Girls Forced Into Marriage," *National Geographic News* article on March 15, 2013 <http://news.nationalgeographic.com/news/2013/13/130313-child-brides-marriage-women-sinclair-photography/>

44 UNFPA. "Marrying Too Young End Child Marriage," p 32-33, chapter 4, cover the picture description.



or two days, but a matter of life. They give their daughters to men they don't know, and these girls then have to spend all of their life with these men.⁴⁵ This is the reality for many unfortunate females in several developing countries throughout the world (again with the exception of China).

In addition, females are held back from school because their parents fear that when they acquire an education, they will no longer respect them or their husbands when they get married. These parents see Western education as a threat to the institution of marriage and family and hold the false perception that an educated female would not want to get married after attaining an education. Studies show, though, that while an educated female is more likely to marry late, she will marry and, when she does, she will have the tools necessary to be a

good wife, mother, and community woman.⁴⁶ Parents, however, disregard the voices and interests of their daughters. Some parents and guardians go as far as engaging a baby girl at birth to the boy whom they select for her to marry when she becomes older.

In some developing countries, parents or guardians do send their daughters to school, but then pull them out because they are afraid they will be raped, which brings down their value when the time for marriage comes, since in many developing societies females are still treated as property. To prevent the possibility of rape, some females are kept at home where it is perceived they will be safe, thus missing their chance to attain an education. Additionally, some parents keep their female children at home because

of the fear of kidnapping, which was seen recently in the kidnapping of 276 females at school by the terrorist organization Boko Haram in Northern Nigeria.⁴⁷

Other practices that hurt opportunities for female education include the practice in Northern Nigeria of putting the female child to work so she can earn money to pay her dowry. A good example of this is the story of Husaina, a woman from in Northern Nigeria who did not have a chance to get an education because she was busy street hawking in order to pay her dowry, as was done traditionally.⁴⁸ She got married at the age of twelve;

⁴⁵ See WFW "Engaging Men to Make a Difference: Ghulam Rabi." Women for Women International. 2015. . <http://www.womenforwomen.org/blog/engaging-men-make-difference-ghulam-rabi> (Accessed October 22, 2015).

⁴⁶ Badamasuiy, *Girl-child education under the sharia: it's relevance to the Muslim community in the Northern Nigeria*, 136

⁴⁷ See Charlotte Alter. "I Abducted Your Girls," Nigerian Extremist Leader Admits." *Time Inc Network*, May 5, 2014. <http://time.com/87658/boko-haram-nigeria-kidnapped-girls/>. (Accessed February 6th, 2015).

⁴⁸ Mack Scheub, et al. 1996. *Life histories of African women*. London, Atlantic Highlands: The Ashfield Press.p.82-86

she stated that, “I was grown by then. One of my breasts was out and the other was not. But since it was the olden days I was not worried. My husband did not have sex with me as soon as I reached his house. He allowed me to stay for some time before he started.”⁴⁹ It is customary for a husband to pay a ‘bride-price’ as a way to compensate families for their loss of their females.⁵⁰

The challenge of child marriage is tied to myopic economic gains. It proscribes female education, which can enhance family income. It also endangers the lives of females because of the high risk of dying during childbirth due to complications, which is, as a matter of fact, the leading cause of death among fifteen to nineteen year-old females in developing nations. It also exposes females to HIV and other sexually transmitted diseases.⁵¹ Needless to say, females have rights and one of those rights is the right to choose whomever they want to marry. Child marriage is an abuse to that human right.⁵² Child marriage blocks females from making a life for themselves based on their own choices.⁵³ Many parents and guardians think they are doing what is best for these females, but in fact they are stealing their voices and stunting the growth and the potential these females possess as agents for change for themselves, their families, and

49 Ibid. p. 87

50 See Toril Brekke et.al *Women, a world report. “A new International book with essays*, (Oxford University Press: New York, 1985), 74.

51 UNFPA. “Marrying Too Young End Child Marriage,” 4-5

52 See Schöpp-Schilling, Beate. Hanna. “The Role of the Convention on the Elimination of All Forms of Discrimination Against Women and its Monitoring Procedures for Achieving Gender Equality in Political Representation.” *International Institute for Democracy and Electoral Assistance (IDEA)/CEE Network for Gender Issues Conference*, 2004, http://www.quotaproject.org/CS/CS_Cedawbudapest04BSS.pdf (Accessed May 1, 2015).

53 See UNFPA. “Marrying Too Young End Child Marriage,” 55

their communities. Although international laws have abolished child marriage, it still persists today. Now the task at hand is to enforce those laws, particularly in nations that signed agreements prohibiting child marriage.

“Child marriage blocks females from making a life for themselves based on their own choices.”

Section 4: Menstruation

The fourth challenge to female education in developing nations is the issue of menstruation. Monthly, females worldwide experience their menstruation cycles. With their monthly period comes some added stress on their wellbeing mentally and physically, including pains associated with migraines, cramps, or PMS.⁵⁴ Females in developing countries face an even bigger challenge during their menstrual period than females in developed countries due to a lack of access to sanitation products, washrooms with toilets, and privacy. They also sometimes confront bullying and embarrassment from ignorant persons.⁵⁵

Studies have found that the provision of sanitary products is linked to female attendance in school and have proven to be important to the education of

54 See article Emily Oster, and Rebecca Thornton. “Menstruation and education in Nepal.” *National Bureau of Economic Research. Working Paper*, 2009: p.2. <http://www.nber.org/papers/w14853> (Accessed October 19, 2015).

55 See Dorah Egunyu. “A bleeding shame: why is menstruation still holding girls back?” *The Guardian* article on May 28, 2014. <http://www.theguardian.com/global-development-professionals-network/2014/may/28/menstruation-girls-education-uganda-sanitation> (Accessed October 19, 2015).

females.⁵⁶ They further discovered that in places like Uganda, females miss one to three days of primary school per month because of menstruation, which, when added up, is eight to twenty-four school days per year.⁵⁷ This translates into missing eleven percent of study days out of the 220 study school days in a year due to menstrual periods.⁵⁸ Emily Oster and Rebecca Thornton, in their study called *Menstruation and Education in Nepal*, found that menstruation cycles pose an even greater threat to education of females in places where “menstrual taboos or restrictions” exist, which limit the mobility of females.⁵⁹

Although outlawed in 2005, the tradition called *chhaupadi* is still very alive in many rural areas of Nepal. This tradition involves the isolation of women and girls during their menstruation period in dark rooms away from everyone and everything because they are regarded as unclean. K. C. Reeti reported that such practices as *chhaupadi* are mainly found in poor and illiterate communities where centuries-old myths and superstitions limit the activities of menstruating women and girls because it is believed that being active or learning during a menstruation cycle will anger a

56 During menstruation, being able to maintain a good menstrual hygiene not only is important to women because it is essential to their to the dignity and wellbeing it plays an important role in maintaining a good reproductive health services to which every woman and girl has a right. For additional info, see article SNV (The Netherlands Development Organization) Uganda & IRC (International Water and Sanitation Centre). “Menstrual Management Report.” *SNV Uganda Water, Sanitation & Hygiene sector*. 2013. <http://www.snvworld.org/node/8227> (Accessed October 19, 2015).

57 This happens partly because of the stigma women and girls face due to menstruation, especially those in rural settings. The struggle due to a lack of services and facilities to help them cope with the physical and psychological pains they undergo during their menstrual periods.

58 SNV and IRC, “Menstrual Management Report,” p.4.

59 Oster and Thornton, “Menstruation and education in Nepal,” p.2.

Hindu goddess. The belief according to Reeti, “is that if a menstruating girl touches any books, Goddess Saraswati, the goddess of education, will be angry.”⁶⁰

This problem is illustrated by testimony from Shrestha, a girl who lives in Nakhipot, Lalitpur, a municipality near Kathmandu, the capital city of Nepal. When she had her period, she said, “I was not allowed to look at the sun, touch any male family member nor even hear their voice.”⁶¹ She also said, “I could not even go to the bathroom and had to make a pot my latrine for seven days.” Like many girls, she not only missed school for a week, but also had to deal with the psychological pressure of hiding and thinking that she was unclean.⁶²

An additional complication of the isolation of females during menstruation is that in some societies, females are sent to live in sheds away from the main house. In those sheds they are exposed to many diseases because they are told not to bathe during their period; this exposure can lead to life-threatening ailments, which can force them to drop out completely from school.⁶³ Furthermore, Shrestha explains that she was not allowed to enter the

kitchen or touch any holy objects and was not fit to be part of society because according to the Hindu religion, she was unclean.⁶⁴

Dikshya Karki, who lives in Kathmandu Valley, Nepal, had the same story, but with an added complication. She stated that since she was not allowed to touch anything in the kitchen, if allowed to go to school, she had to go early in the morning before anyone was awake. When a person is hungry, he or she cannot focus on studying, and thus many females are again challenged in their ability to obtain an education.

Section 5: War, Conflict, and Patriarchal Traditions

Finally, there is a welter of political issues that inhibit females from obtaining an education, including war, patriarchal traditions, and low parental literacy rates. In regards to low parental literacy rates, it is clear from many studies that it is difficult for a female to get support

that “it has probably become more dangerous to be female than to be a soldier in modern conflict.”⁶⁵ The findings of this article agree with that statement because the attainment of an education is not what females think about when their lives are in danger. Females are often subject to mass rape and forced impregnation that are staples of modern war, and a majority of people in the world are ignorant to the fact that females make up eighty percent of refugees and the majority of civilian lives claimed as casualties in wars. In places where landmines and explosives are still present, mobility of females is limited. When school infrastructures are destroyed, because of either war or natural disasters, females do not have a place to go to school.⁶⁶ Mentally, the consequences of these ordeals are even longer lasting than the physical effects; it is difficult for many females to recover psychologically from such traumas, which in turn destroy the hopes and potential of many generations to

“Females make up eighty percent of refugees and the majority of civilian lives claimed as casualties in wars.”

from illiterate parents who do not see the value of an education. Their lack of education creates a barrier to the education of their daughters, especially in developing nations.

In regards to war, it is clear that civil wars, coups, terroristic attacks, and revolutions make female education suffer. In a comment posted to the *Quora blog*, on March 29, 2014, Rebecca Metz, creator of VaginaNewsNetwork.com, made a key statement in which she quoted UN Military Advisor Patrick Cammaert, who stated in 2008

come. These political issues pose a massive threat to female education in developing nations.

Then there is the existence of patriarchal societies. They pose another challenge to the education of females in developing nations. In the case of South Africa, females

60 See K.C. Reeti. “Part: 8- In Nepal, Menstruation Can Mean Days in Isolation.” Women’s news.org article on March 5, 2015. <http://womensnews.org/story/health/150304/in-nepal-menstruation-can-mean-days-in-isolation#.VW35YFzBzGc> (Accessed October 19, 2015). Many superstition are common especially in uneducated, poor and rural areas.

61 Ibid.

62 Because menstruation is seen as an unclean thing, these girls are so scared to even talk about it as it is a shameful thing associated with the female body. It is even seen in India as a curse. See Quartz India article for more information: <http://qz.com/252419/the-full-extent-of-what-urban-india-believes-about-menstruation-is-extraordinary/>

63 See Eleanor Goldberg. “All The Inconceivable Ways Women Deal With Their Periods Worldwide, And How To Help.” *Huffington Post* article on July 14, 2015. http://www.huffingtonpost.com/2015/07/14/menstruation-myths_n_7495568.html?ncid=fbklnkushpmg00000054&ir=Impact (Accessed October 19, 2015).

64 K.C. Reeti. “Part: 8- In Nepal, Menstruation Can Mean Days in Isolation.” 2015.

65 See Rebecca Metz. “What are some of the ways women are discriminated against that men are often unaware of?” *Quora Blog*. Comment on March 29, 2014. To view blog follow the link <https://www.quora.com/What-are-some-of-the-ways-women-are-discriminated-against-that-men-are-often-unaware-of> (Accessed October 19, 2015).

66 See full article, UNESCO. “The hidden crisis: Armed conflict and education.” *Education for All Global Monitoring Report*, (March 2011), 131, accessed November 18, 2015, <http://unesdoc.unesco.org/images/0019/001907/190743e.pdf>

are largely discriminated against and relegated to a lower status in society.⁶⁷ In education, females are restricted to courses that are stereotypically feminine, such as cooking, home economics, art, and social studies, while males study mathematics, physics, computer science, and other related courses. When it comes time to specialize or take entrance exams, the females are simply not able to compete with the males who are more knowledgeable and comfortable with content involving higher-level critical thinking. This situation contributes to females lagging behind and dropping out of school, which puts on females inescapably on the path to factory and other menial jobs.⁶⁸

However, little education is better than no education. Although poor education, such as the kind described above, is likely to lead females to menial jobs, at least it can help them navigate this complex world on their own. When parents send their daughters to school for any length of time, they are still able to learn how to count and read. These simple abilities give females a basis for understanding more about the world and the ability to reach for higher goals if they wish to do so. Paulo Friere, the Brazilian revolutionary educator, said it best: “I can read. Therefore I can control the world.”⁶⁹ There is a great deal of powerful evidence that points to why females should be educated. As one authority wrote, “education is one of the most potent ingredients, in a mix of advantages, for changing the lives of females in the developing world.”⁷⁰ As the above sections

67 See article. UNICEF. “Girls Education Movement South Africa.” 2006. Accessed October 17, 2015. http://www.unicef.org/southafrica/SAF_resources_gembrief.pdf

68 See Toril Brekke, et.al. *Women, a world report. A new International book with essays*, 75.

69 Ibid. p.76

70 Ibid.

document, there are many challenges to female education. Now we turn to describing the efforts being made to address these challenges.

Section 6: International Efforts Addressing Challenges

This section sheds light on the efforts of governmental organizations, NGOs, and individuals that are addressing the challenges females face in obtaining an education in developing nations. Some of the governmental organizations described are the United Nations along with its subsidiary units, which include UNICEF, UNGEI, UNESCO and the World Bank. In regards to NGOs, the Girl Effect Organization and the Malala Foundation are discussed. Finally, this section examines work and hope of individuals like myself.

There are many efforts being carried out to address inequality in the world. The most concrete step in this direction came in 1948 when the United Nations created the Universal Declaration of Human Rights; this document provided the first international recognition to the right to education when it stated, “everyone has the right to education.”⁷¹ A second step came in 1960 with the creation of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Convention Against Discrimination

71 In relevant part, the Declaration states:

1. Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.

2. Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.

3. Parents have a prior right to choose the kind of education that shall be given to their children.

in Education. This is the oldest global treaty that warrants the right to free and compulsory education, and the parties to this Convention agreed to eliminate discriminatory educational practices.⁷² UNESCO has consistently been an organization that coordinates regional conferences meant to encourage countries to implement particular laws, and they continue to monitor violations to access to education through a complex process and urge member states to adopt some of these laws into their national constitution.⁷³

Many nations have agreed to the laws and are working to protect the right of education for females, especially those in the developing nations. One of UNESCO’s main priorities is gender equality and education. It is working today to combat low illiteracy rates around the world, which is highly intertwined with female literacy rates in particular because studies have shown that females in developing nations account for two thirds of the world’s illiterate persons.⁷⁴ UNESCO is doing this because they believe that literacy empowers females and that female education has a “multiplier effect” – literacy can be used as a tool to help eradicate poverty, reduce child mortality, curb population growth, achieve gender equality, and ensure sustainable development, peace and democracy. In order to increase the worldwide literacy rate, UNESCO is investing in quality teachers.

When females in developing nations have teachers who are role models and care about their wellbeing

72 Burch, “Rhetoric or Right,” 7

73 Ibid. 8

74 See full report at. Friedrich Huebler and Weixin Lu. “Adult and Youth Literacy, National, regional and global trends, 1985-2015.” UNESCO, UIS Information paper. (June 2013):9, accessed November 17, 2015. <http://www.uis.unesco.org/literacy/Documents/Intl-literacy-day/literacy-infographic-2013-en.pdf>

and academic progress, they are more likely to stay in school. This is the goal of UNESCO's Global Partnership for Girls and Women's Education program called "Better Life, Better Future." In addition, UNESCO seeks to keep expanding opportunities where females can learn both informally and formally using information, communication and technology (ICT). Its support for and development of gender-sensitive curricula and textbooks free from discrimination is key to ending gender-based violence in educational settings, which are some of the hurdles that females must jump over during the course of their education.⁷⁵

Another key organization of the United Nations that addresses the challenges to female education in developing nations is The United Nations Children's Emergency Fund, or UNICEF, which was established in 1946.⁷⁶ This organization was originally formed to aid children affected by war, drought, and famine, but later was expanded to provide the "availability of educational and vocational training."⁷⁷ Since its founding, UNICEF has partnered with many other entities, one of which was the Canadian Development Agency (CIDA). In 1994, CIDA agreed to contribute ten million dollars to support goals of guaranteeing that females in sub-Saharan Africa, the Middle East, and North Africa obtain equal access to quality primary education.⁷⁸ UNICEF and its partners undertake such projects in order to promote equal

participation in various communities and societies and to implement its long-term strategic plan for advancing females' education, through its Global Girls' Education Program.⁷⁹

Other key efforts on behalf of female education include the work of the World Bank, the United Nations Food and Population Agency (UNFPA), the United Nations Development Program (UNDP),

"Literacy can be used as a tool to help eradicate poverty, reduce child mortality, curb population growth, achieve gender equality, and ensure sustainable development, peace and democracy."

and the United States Agency for International Development (USAID). All of these organizations have recognized the need for educating females as a prerequisite to sustainable development and are working to improve basic levels of education for females in developing nations. USAID and the World Bank, for example, are providing the financial support needed to cover the opportunity and the fiscal cost associated with the female education.⁸⁰ USAID and the World Bank are two examples of organizations that have recognized the need to promote education for females as a way reduce gender disparity.⁸¹

Another organization that is addressing the challenge to female education is the International Labor Organization (ILO). It works to protect children by (1) defining a

child as a person up to age eighteen, (2) reasserting states' responsibilities to guarantee access to free primary school education, and (3) authorizing vocational training for children taken from the labor force.⁸² However, the ILO also recognizes that certain children need to work to survive.⁸³ Accordingly, it endeavors to adjust to the educational needs of these children through "learn and earn" programs.⁸⁴

The United Nations has also passed resolutions to promote female education, including the so-called millennium development goals (MDG). Goals two and three in particular aim to achieve universal primary education, promote gender equality, and empower females.⁸⁵ There have already been some successes as a result of this effort. The most recent report in 2015 showed that in terms of goal two, the literacy rate among youth aged fifteen to twenty-four has increased globally from eighty-three percent to ninety-one percent between 1990 and 2015; in regards to goal three, many more females are now in

⁷⁵ See more at <http://en.unesco.org/gem-report/>

⁷⁶ UNITED NATIONS, UNITED NATIONS ACTION IN THE FIELD OF HUMAN RIGHTS 209 (1980). See more at http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/34/105

⁷⁷ Burch, *Rhetoric or Right*, 19

⁷⁸ UNESCO, Thematic Studies: Girls Education 14 (2001). <http://unesdoc.unesco.org/images/0012/001233/123332e.pdf>

⁷⁹ UNICEF, Final Consolidated Report to the Canadian International Development Agency (CIDA) to government of Canada on CIDA phase I support to the UNICEF Girls' Education Programme in Africa (1999)

⁸⁰ UNESCO, Thematic Studies: Girls Education 14 (2001). <http://unesdoc.unesco.org/images/0012/001233/123332e.pdf>

⁸¹ *Ibid.* 15

⁸² Convention Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labor, June 17, 1999, accessed November 19, 2015, <http://www.ilo.org/public/english/standards/ipecc/ratification/convention/text.htm>

⁸³ *Ibid.* Burch, *Rhetoric or Right*, 34, ILO Convention No. 10 prohibited education that prejudiced school attendance for children under fourteen-years-old. ILO Convention No. 138 raised the minimum age for employment to fifteen-years-old. *Ibid.*

⁸⁴ *Ibid.* 34 ILO-IPEC, Action against Child Labor: The Role of Education 10 (1999). The ILO functions as a specialized agency of the United Nations and was created to help improve labor conditions.

⁸⁵ See United Nations. "Millennium Development Goal Report 2015." United Nations, New York, 2015, 4

school compared to fifteen years ago, thus reducing the gap between males and female.

There is also evidence that the importance of educating females is gaining momentum in many developing nations. The World Bank's 2012 World Development Report on Gender Equality and Development found that the gender gap has closed in almost all countries in primary education and that it is shrinking quickly in secondary education. The data showed that there are more young females than males in universities in two-thirds of the countries for which the data available. On the down side, it reported that more than thirty five million females do not attend school in developing countries.⁸⁶ In addition, gender disparities still persist and millions of females live in poverty and lack basic need for an education.⁸⁷

It is such persisting disparities that have moved non-governmental organizations (NGOs) to act, two of which are the Girl Effect and the Malala Fund. The Girl Effect Organization is an NGO that works to use female education in developing nations as a way to eradicate poverty worldwide. The NIKE Foundation initially founded this organization as a movement in 2008 in partnership with the Novo Foundation and the United Nations Foundation at the World Economic Forum, and it was later developed into an NGO.⁸⁸ Its efforts are based on the belief that when females are given opportunities, such as an education, they will be adequately prepared and have better chances of getting themselves and their families

out of poverty. Furthermore, there will be a "multiplier effect" because these females in developing nations will go on to influence and positively develop their villages, cities, and nations.⁸⁹

Since its founding, Girl Effect has partnered with numerous other organizations. One of these organizations is the Unreasonable Group, which together with the Nike Foundation launched a series of start-ups that address social issues.⁹⁰ These start-ups are committed to addressing the challenges that females face in developing nations in regards to achieving an education. An example of one of these organizations is ZanaAfrica, an organization set up by United States expat Megan White Mukuria. ZanaAfrica creates low cost sanitary pads for girls in Africa in order to help solve the menstruation challenge to female education in developing nations. According to Mukuria, many girls cannot afford sanitary pads and, in effect, miss school or are not properly engaged when they do attend, and thus fall behind in their studies.⁹¹

Another organization that has taken up the cause of female education in the developing world is the Malala Fund. Malala Yousafzai, the founder of this organization, was shot in the head by the Taliban in 2012 for speaking out in favor of female education. Since her recovery, her name is synonymous with the courage to speak up about injustice, the passion to plead for education

of females worldwide, and the hope that gender equality will happen in the future. She is the youngest recipient of the Nobel Peace Prize and is a human rights activist known mainly for her advocacy for the education of females in her native Swat Valley in the Khyber Pakhtunkhwa province of northwest Pakistan, a place where the local Taliban had sometimes banned females from attending school.⁹² She is raising support for her NGO, the Malala Fund, with her book, *I Am Malala*, and her recently released documentary, *He Named Me Malala*.⁹³ This organization works to ensure that young females complete twelve years of safe, quality education so they can achieve their potential and be positive change-makers in their families and communities.⁹⁴ In addition, the Malala Fund partners with other NGOs all over the world to help empower females by amplifying their voices, invests in local education leaders and programs, and advocates for more educational resources and safe schools for every child.

Lean In, the Clinton Foundation, LetGirlsLearn, and GirlUp also recognize the importance of educating females in developing nations and are working to provide school uniforms for students, free meals, and books in order to offset the direct and indirect costs for female students in poverty. These organizations work to build schools that are girl friendly; advocate

92 The Associate Press. "Malala Yousafzai Becomes Youngest-Ever Nobel Prize Winner". *The People Magazine*. October 10, 2014. Accessed November 19, 2015, <http://www.people.com/article/malala-yousafzai-wins-nobel-prize>

93 Marie Arana. Book review: "I Am Malala" by Malala Yousafzai. *The Washington Post*, October 11, 2013. Accessed on November 19, 2015, https://www.washingtonpost.com/opinions/book-review-i-am-malala-by-malala-yousafzai/2013/10/11/530ba90a-329a-11e3-9c68-1cf643210300_story.html

94 About, Malala.org, see more at <https://www.malala.org/about>

86 Source: Ana, Revenga, and Sudhir, Shetty, "Empowering Women Is Smart Economics," 2

87 Ibid. 4, 7

88 Launched as a non-profit in September of 2015. See about of the Girl Effect Organization at <http://www.girleffect.org/about-us/#tab-0>

89 UNICEF. "The State of the World's Children 2004, Girls, education and development." The multiplier effect of educating girls: The United Nations Children's Fund 2004. 45, 54. <http://www.unicef.org/sowc04/files/Chapter4.pdf>

90 This program launched in November of 2014

91 See Nastaran Tavakoli-Far. "The entrepreneurs helping girls in the developing world." *BBC News*, January 29, 2015. (Assessed October 10, 2015). <http://www.bbc.com/news/business-31002226>

for those who are trapped in child marriage, raped or unjustly imprisoned; and create awareness against sexually transmitted diseases and provide care for those females who fall victim of unwanted pregnancies. They also work with social workers in the communities, attempt to get school authorities to involve parents in their children's education, and create adult literacy campaigns.

Besides the organized group efforts to push female education, there are also individuals working towards the same goals. Sunitha Krishnan has set up shelters and entrepreneurship campaigns in India with the goal of helping females escape sex trafficking.⁹⁵ Then there is Mukhar Mai with the Mukhar School for Girls in Pakistan, which is doing great work in providing educational opportunities for females in that area.⁹⁶ Finally, there is the undertakings of individuals like Ann Cotton, with her schools in Zambia that educate underprivileged females, and Nicholas Kristof and Sheryl WuDunn, who both continue to speak up against injustices against females.⁹⁷

I wrote this paper, because I, too, want to be part of the change that I wish to see in the world. It is my hope that this thesis is the first step towards my larger goal of developing an NGO that aims to provide educational opportunities for both males and females in developing nations. I want to work to establish relationships and partnerships that will help to address some, if not all, of the challenges to the education of females in developing nations as listed above as well as to change the perception of males in those communities towards female

education. The length of this paper does not permit me to go into further detail. However, I know that for there to be gender parity and equality, laws and policies should not just be made with the hope that things will change. Instead, people need to influence and change cultural perceptions from the ground

modern world. It is also fundamental to self-awareness, self-identity, and self-development. Studies show that an educated female has the power to influence change in her life, family, and community. Each additional year of education gives a female a ten to twenty percent chance of earning more income in her lifetime. It

“Changing attitudes and cultures are key ways of combating gender stereotypes, sexism, and other forms of discrimination against females through the use of gender-neutral policies, media, and education.”

up. Changing attitudes and cultures are key ways of combating gender stereotypes, sexism, and other forms of discrimination against females through the use of gender-neutral policies, media, and education.

If males and females are to see each other equally, it begins with changing stereotypes established long ago. It involves influencing the younger generation of males and females who are the future leaders, fathers, mothers, brothers, and sisters. If they are convinced that education is critical, they will fight to get their children or siblings educated, or at least recognize the importance of educating females as well as males. Society benefits when its entire population is educated, as numerous studies have shown. If a society fails to invest in females, it is only limiting itself – in the words of a Chinese proverb “women hold up half the sky.”

Conclusion

The necessity and importance of investing in the education of females in developing nations cannot be overlooked. Education is essential to functioning and advancing in the

reduces mother and infant mortality rates and increases the welfare of the whole economy with an increase in GDP. With education, females become a key component to ending poverty worldwide.

One of the major challenges to female education is poverty tied to gender biases. Another challenge is the issue of religious interpretation or misinterpretation, which tends to be a problem in predominately Muslim societies. Child marriage poses a threat to female education in developing nations because when females are married off at a young age, it often means withdrawal from school for the rest of their lives. Menstruation is, of course, a natural and biological function, but it poses a challenge to female education in places such as Nepal, because these societies follow a tradition called *chhaupadi*, the seclusion of females and the belief that they are unclean during their menstrual cycles. There are also various political challenges to female education from war to patriarchal traditions.

However, all hope is not lost because many international governmental, organizations such

⁹⁵ Kristoff and Wudunn, *Half the Sky*, 56

⁹⁶ Ibid. 70-79

⁹⁷ Ibid. 179-188

as the United Nations and USAID are working to combat those threats to the education of females in developing countries. These entities have created laws and treaties that establish the universal human right to have the right to an education. Other agencies, such as UNICEF, UNESCO, and the World Bank, work to provide access to better teachers and funding for projects that work to empower females. In similar ways, numerous NGOs, two of which are the Girl Effect organization and the Malala Fund, advocate for education of females worldwide by providing books, uniforms, and educating females on issues they themselves face. There needs to be an increased awareness about these kinds of issues and challenges.

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“Too Much Water Hast Thou, Poor Ophelia”: An Object-Oriented Reading Of *Hamlet*

By: Holly Ratcliff

If nonhuman entities are denied agency, then a vital perspective is silenced, limiting the expansive possibilities of a text. This analysis surveys the various roles objects play in literature and argues for their underlying Thing-Power, or the ability to interact with human entities. Jane Bennett, author of *Vibrant Matter: A Political Ecology of Things*, was the first to coin this term, applying Thing-Power to literature, politics, philosophy, and engineering. Her text is in conversation with Graham Harman’s dissertation *Tool-Being: Heidegger and the Metaphysics of Objects*. Unlike Bennett’s text, Harman’s analyses of objects were focused in philosophy. Overtime, a distinction was made between Object-Oriented Philosophy (OOP) and Object-Oriented Ontology (OOO), which allowed the theory a greater expanse for application. By applying this method of speculative relativism to literature, readers gain access to humankind’s detailed history and relationship

with materialism. This article is written in the form of a literary criticism, within the subfield of Ecocriticism – the practice of coupling literature with ecology. By implementing this theory, a work as well known as William Shakespeare’s *Hamlet* is reinvigorated with an alternative perspective in which water, flowers, clothing, and soil act as integral players, displaying an influential Thing-Power. Ecocritical theory seeks to reveal our perception of waste and objects to personify environmental issues. By endowing objects with Thing-Power, their value increases. This mindset promotes sustainability and preservation. Beginning with literature, Ecocritics expose the importance of objects, often times revealing the extortion of our environment and consequently promoting conservation. By applying this theory to *Hamlet*, readers will gain a greater understanding of the roles objects have upon their mortality and the untapped immortality objects afford humankind.

Born in 1564, William Shakespeare's work has been performed and studied for centuries. More than simply a literary touchstone, Shakespeare's plays represent the 16th century's historical relationship with objects. Themes of mental health, betrayal, and suicide pervade his verse. Through a "traditional" observation, human entities—as opposed to objects—perpetuate these themes; a formal criticism might touch on the symbolic qualities of the placement or use of an object, but denies totems the independence Ecocritical theory reveals. Object-Oriented Ontology seeks to reveal the influence nonhuman entities have upon their human counterparts, exposing their underlying Thing-Power. So, when Object-Oriented Ontology raises these objects to the significance level of humans, objects shed their ineffectual guise and reclaim their hidden potential. If readers acknowledge this potential, it will revitalize their perspective of objects, thereby enhancing the value of nonhuman entities. This theory coaxes readers to rethink the roles objects play in their everyday lives. In literature there is an evident transference of power between human and nonhuman entities. By acknowledging this relationship, we can move away from the use, abuse, and disuse of objects, slowing the pollution of our world and progressively preserving our most essential object: Earth. In Shakespeare's *Hamlet*, water, flowers, clothing, and soil repeatedly display Thing-Power, endowing characters with ulterior motives and conclusions and establishing the importance of environment in the play.

Ophelia, Hamlet's love interest, maintains one of the most tangible

relationships with objects. In Act IV, upon reaching a state of extreme mourning due to her father's sudden death and her severed relationship with Hamlet, Ophelia is driven to collect flora. She distributes a different and particular species of flowers to each person: her brother, Laertes; Hamlet's uncle, King Claudius; and Hamlet's mother, Queen Gertrude. Each species of flowers represents an abstract, emotional concept. Ophelia begins, "There's rosemary, that's for remembrance; pray you, love, remember" (4.5.179-180). As she passes out these tokens she signifies their purpose: "remembrance." In this case, rosemary is a token with the poignant power to transfer love and remembrance upon these individuals. The ability to gift the intangible is truly optimistic, but Ophelia's ability to communicate her depression or growing instability

give you some violets, but they withered all when my father died" (4.5.188-189). Here, Ophelia has explicitly revealed that the gift-giving ceremony is a mode of grieving, but the inability to adequately grieve is made apparent by the lack of the proper flower. Like Ophelia's father, violets cannot be found in the living realm, highlighting her want of means to accept the loss of love from both her father and Hamlet. This scene is often cited to support Ophelia's insanity; her riddles are dismissed as ravings and her actions are considered childlike. Yet, when objects are reevaluated as communicative tokens, this scene can be understood as a final plea for recognition. These flowers collectively convey Ophelia's inability to lament and her devout wish for this to be acknowledged.

Ophelia's suicide swiftly follows the gift-giving ceremony,

"In literature there is an evident transference of power between human and nonhuman entities. By acknowledging this relationship, we can move away from the use, abuse, and disuse of objects, slowing the pollution of our world and progressively preserving our most essential object: Earth."

has deteriorated; nonhuman entities step in as messengers, mending the communication gap. This continues with her next gift, "There's rue for you, and here's some for me" (4.5.184-187). By presenting rue, whose namesake is synonymous with lamentation, Ophelia attempts to lament her losses, but this can only do so through the distribution of literal rue. The purpose of the flowers is further clarified, and the darker motive underlying this gift-giving ceremony revealed with the absence of violets: "I would

only separated by the theatrical timeframe of a single scene. The speech is chiefly descriptive, focusing on the surrounding objects that influence Ophelia; flora and water each play a part in her demise. The cause of Ophelia's death is difficult to ascertain from Gertrude's announcement alone, and is thus open to audience interpretation: a mistake brought on by a compromised state of mind or a suicide. If the gift-giving scene can be interpreted as a plea for acknowledgement, then Ophelia's

death could easily be interpreted as the latter. This interpretation would still bestow Thing-Power upon the flowers, as “on the pendent boughs her crownet weeds / Clamb’ring to hang, an envious silver broke, / When down her weedy trophies and herself, / Fell in the weeping brook” (4.7.172-75). From this viewpoint, the “crownet weeds” themselves struggle to hang along the waterfront, and thus the still hypnotized Ophelia is dragged down by their Thing-Power, falling victim to the brook alongside them. The water and flowers demonstrate a simultaneous influence upon her.

“Similar to Ophelia’s interaction with the brook, both the environmental elements of soil and water are intrinsically involved in the balance of life and death.”

This is the last instance of flora imagery in this speech as Gertrude shifts focus onto another object.

As Gertrude draws her announcement to a close, she addresses the nature of Ophelia’s clothing at the time of her death. She explains, “Her clothes spread wide, / And mermaid like awhile they bore her up” (4.7.76-77). Momentarily, the clothes are somewhat mystical, affording Ophelia a mermaid-like demeanor. Inevitably, the garments become “heavy with their drink, / Pull[ing] the poor wretch from her melodious lay / To muddy death” (4.7.82-84). Since Ophelia’s clothing pulled her to her muddy death, this announcement ends with an affirmation of Thing-Power’s ability to induce death upon human entities. As Ophelia dies, she is

immersed in mud; her body begins to decompose into a nonhuman entity.

It is valuable to note Laertes’ reaction to the news of Ophelia’s death; he does not yet perceive water as a malignant force behind Ophelia’s death. Instead, Laertes experiences its positive Thing-Power. He states, “Too much water hast thou, poor Ophelia, / And therefore I forbid my tears” (4.7.186-187). For Laertes, water stimulates the grieving process, the precise process Ophelia was incapable of completing. Unlike Ophelia’s desire for lamentation, Laertes initially forbids himself from mourning. Following this, Laertes does weep, referring to the act as “our trick; nature her custom holds, / Let shame say what it will” (4.7.188-189). By giving into weeping, water has effectively been transferred to Laertes, who facilitates the spring of water from within himself. The Thing-Power of water was exchanged between siblings, playing a part in the death of one while facilitating the grieving process for the other.

Ophelia’s death, and water’s part in it, is again discussed amongst the play’s characters as the plot moves forward from Act IV into Act V. Two gravediggers, referred to as First Clown and Second Clown, are the chief players in this scene, discussing the nature of Ophelia’s death, but in riddles so as to comfort an audience. Digging into the deeper meaning of their philosophical dialogue, there is an evident Thing-Power bestowed upon water, which would suggest that this element held a higher agency behind Ophelia’s death than flora or clothing. First Clown begins by inquiring about Ophelia’s burial: “Is she to be buried in Christian burial, when she willfully seeks her own salvation?” (5.1.1-2). This

question is fairly straightforward, but opens up the ongoing debate about the method of Ophelia’s death; was Ophelia’s death solely a product of a compromised, suicidal mental state or the result of external Thing-Power. First Clown argues the former, and thus she would not receive salvation. On the other hand, Second Clown’s rebuttal supports the opposite: “I tell thee she is; therefore make her grave straight. The owner hath sat on her, and finds it Christian burial” (5.1.3-5). First Clown questions this “How can that be, unless she drowned herself in her own defense?” (5.1.6-7). The Object-Oriented perspective would find a simple answer for this: although Ophelia defended herself by first floating in the brook, her clothes “pulled” her into the depths. First Clown would not support this theory initially: “It must be *se offendendo*¹, it can not be else. For here lies the point: if I drown myself wittingly, it argues an act, and an act hath three branches—it is to act, to do, and to perform. Areal, she drowned herself willingly” (5.1.9-12). Via a string of satirical lawyer-logic, First Clown eventually comes to support the Thing-Power of water. His train of thought moves into an Object-Oriented perspective: “Here lies the water; good. Here stands the man; good. If the man go to this water and drown himself, it is, will he, nill he, he goes, mark you that. But if the water comes to him and drown him, he drowns not himself” (5.1.15-19). Here, First Clown has

¹ In Daniel Kornstein’s book *Kill All the Lawyers?: Shakespeare’s Legal Appeal*, Kornstein dissects First Clown’s use of this legal jargon: “The legal doctrine known as *se defendendo* was in use for four hundred years leading up to Shakespeare’s time whenever a fight occurred and one party retreated as far as he could go before resorting to force. If, with his back literally against the wall, he then killed the aggressor, *se defendo* spared the defendant from the death penalty. Killing *se defendo* was called excusable homicide. But, the defendant, though saved from execution, still had to forfeit his property as expiation for his having taken human life” (104-105).

recognized water as a nonhuman entity capable of inflicting Thing-Power upon its human counterpart. While First Clown originally did not mean to divest agency upon water, he effectively did so; a truth drawn from what was intended to be a jest. From this point, one could surmise that Ophelia's death was not of a suicidal nature, but one that was ultimately caused by water's will to drown.

Finally, Hamlet himself must cope with the process of grief and death and is triggered to do so by examining an object: the skull of his deceased jester. Hamlet's discovery of the skull forces him to reexamine his own mortality, harkening back to his original query, "to be or not to be" (3.1.57). By examining the skull of Yorick, Hamlet is moved to question the processes of death and decay. Similar to the Grave Diggers' dialogue, Hamlet spins his own web of philosophical logic:

As thus: Alexander died,
Alexander was buried, Alexander
returneth to dust, the dust is
earth, of earth we make loam, and
why of that loam whereto he was
converted might they not stop
a beer barrel? Imperious Caesar,
dead and turned to clay, might
stop a hole to keep the wind away.
Oh, that that earth which kept the
world in awe should patch a wall
t'expel the winter's flaw! (5.1.208-
216).

This method of reasoning parallels the syntactical structure in which First Clown's dialogue was executed; it effectively directs Hamlet to a well-thought out conclusion through rhetorical questions and an examination of environmental elements. For Hamlet, an evaluation of soil and

the equality of decomposition provides him peace from his "to be or not to be" query. By exploring the process by which the human body decomposes, Hamlet bestows Thing-Power upon soil. First, he breaks down the process of decomposition: "Alexander died, Alexander was buried, Alexander returneth to dust, the dust is earth, of earth we make loam..." Even a renowned hero is transformed by Thing-Power, as the human entity mimics its soil setting and converts into its nonhuman form. Similarly, Hamlet dwells on Caesar's death: "Imperious Caesar, dead and turned to clay, might stop a hole to keep the wind away. Oh, that that earth which kept the world in awe should patch a wall t'expel the winter's flaw!" Clay's ability "t'expel" winter showcases soil's resistance; the newly transformed Caesar fights against the season's harsh conditions, even in his nonhuman form. Utilizing well-known political figures, like Alexander the Great and Julius Caesar, Hamlet seeks to speak of the equality of all humankind, despite previous labels, like socioeconomic status, that are maintained among the living. Hamlet expresses the eventual equality of all humans based on mortality and thereby supports the transference of Thing-Power between human beings and the earth. Similar to Ophelia's interaction with the brook, both the environmental elements of soil and water are intrinsically involved in the balance of life and death. They act as agents of equality, perpetuating the cycle of mortality, ultimately transferring their Thing-Power to humankind and metamorphosing humans into nonhuman entities.

Throughout *Hamlet*, there is an evident struggle between the Thing-Power of flowers, water, clothing,

and soil. In Ophelia's case, the cause of her death is skewed depending on which object possessed the higher Thing-Power at the time of her demise. In Hamlet's case, soil is directly linked to his struggle with impending mortality, effectively revealing objects' ability to maintain the human soul through nonhuman metamorphosis. As Laertes learns of his sister's death, he experiences an immediate reaction by producing water, completing the lamentation process Ophelia was denied, and while Julius Caesar's body decays, the power of his nonhuman form withstands the force of the harshest season: winter. Natural elements, like water and earth, seamlessly empower humans with communication and immortality. As Object-Oriented Ontology is applied to *Hamlet*, objects become integral players alongside their human counterparts. By reading with the Object-Oriented lens, traditional interpretations are uprooted to reveal their untapped, interwoven potential restlessly waiting beneath.

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Sex Estimation In Forensic Anthropology Using The Radius, Femur, And Scapula

By: Simone Longe

An essential aspect of conducting a forensic anthropological analysis is estimating the sex of an unknown individual. Sex estimation narrows down missing persons lists significantly. Research continues to show that the os coxa (pelvis) is the best indicator of sex due to the morphological differences between males and females (Phenice, 1969; Buikstra and Ubelaker, 1994; Blanchard, 2010; White et al., 2012). However, pelvic bones are not always available. Forensic anthropologists are often presented with incomplete skeletons, which require other bones beside the pelvis to be relied upon to estimate the sex of a person.

According to Spradley and Jantz (2011), metric analysis of the postcranial skeleton for estimating sex provides more accurate results than both metric and nonmetric traits of the skull. Further, some postcranial elements prove more accurate than others. In Spradley and Jantz's findings, the radius, femur, and scapula were among the highest scoring estimators for sex.

The purpose of this research is to compare the sexing accuracy of the radius, femur, and scapula with the Texas State University Donated Skeletal Collection to those results found among the same postcranial elements in Spradley and Jantz's research. The sample used for Spradley and Jantz was taken from the Forensic Anthropology Data Bank (FDB), which is comprised of donated individuals and forensic cases of known demographic profiles from regions within the United States. This study will ascertain if Spradley and Jantz's results can be used on skeletal remains from other regions of the United States by using the Texas State University Donated Skeletal Collection.

According to the American Board of Forensic Anthropology, "forensic anthropologists apply standard scientific techniques developed in physical anthropology to analyze human remains, and to aid in the detection of crime" (ABFA, 2010). Furthermore, forensic anthropology today is defined as "the scientific discipline that focuses on the life, the death, and the postlife history of a specific individual, as reflected primarily in their skeletal remains and the physical and forensic context in which they are emplaced" (Dirkmaat et al., 47). Forensic anthropologists conduct various analyses, including skeletal trauma analysis, forensic taphonomy, and forensic archaeology. It is important to note that forensic anthropologists only work with human remains that are of both modern and of forensic significance (Tersigni-Tarrant and Shirley, 2013).

Although forensic anthropologists perform many roles of skeletal analysis, perhaps their most important is conducting biological profiles for unidentified individuals. A biological profile consists of the basic demographic information of a person: the sex, age, ancestry, stature, and any defining characteristics of an unidentified individual. Recognizing certain aspects of these unidentified individuals can narrow down missing persons lists by a large margin and help to reveal the identity of the person. One of the first steps in conducting a biological profile is estimating the sex, or whether they were biologically male or female. Research continues to show that the pelvis is the best indicator of sex due to the morphological differences between males and females, such as a wider subpubic angle and flared pelvic blades in

females to facilitate child bearing (Berg, 2013). These differences can be viewed in Figures 1-4 at the end of this section. However, the pelvis is not always available. Forensic anthropologists frequently encounter incomplete skeletons with a missing, fragmented, or damaged pelvis.

Although forensic anthropologists are careful to recover all skeletal elements and items of evidence in a forensic investigation, there are factors that can contribute to the collection of an incomplete skeleton. Common factors include the scattering of skeletal elements on the ground due to animal scavenging, weather events washing them away or damaging them, or inexperienced law enforcement who may not be trained in osteology or proper excavation techniques. Because skeletons retrieved from forensic investigations have the possibility of being incomplete, other bones must be relied upon to estimate the sex of a person when the pelvis is missing (DiGangi and Moore, 2013).

According to Spradley and Jantz's (2011) study entitled "Sex Estimation in Forensic Anthropology: Skull versus Postcranial Elements," the metric use of the postcranial skeleton for estimating sex provides more accurate results than both metric and nonmetric traits of the skull, yet some postcranial elements proved more accurate than others. Spradley and Jantz used only positively identified American black and white individuals; however, only whites are discussed here, as they were the ones analyzed in the following validation study. In Spradley and Jantz's findings, the radius, femur, and scapula were among the highest scoring estimators for sex, with classification rates ranging from 94.34% for the radius, 93.54%

for the femur, and 93.04% for the scapula (Spradley and Jantz, 2011).

Postcranial bones can be used in sex estimation because of sexual dimorphism. Sexual dimorphism is generally defined as the shape and size differences between males and females, which includes the skeleton (Fuentes, 2012). This can also include differences in timing of development between each sex. According to DiGangi and Moore (2013), "the adult female skeleton maintains prepubescent gracility (except in the pelvis), whereas the adult male skeleton shows more robusticity than the female skeleton (especially at muscle insertion sites) in most cranial and postcranial elements" (DiGangi and Moore, 2013:92). Although earlier species of the genus *Homo* were vastly more sexually dimorphic than modern humans, modern humans still display a significant level of differences in size and shape between sexes (Fuentes, 2012:305-6).

In a study done by Betti (2014), pelvis size was compared between sexes in twenty populations across the world, including the United States. The results showed that

(SWGANTH, 2010). This can include extrinsic factors such as socio-economic status, activity levels, and nutritional status. Intrinsic factors such as genetics and hormone levels can also affect the level of sexual dimorphism among an individual (DiGangi and Moore, 2013:93).

Another study on sexual dimorphism in long bones was performed on a modern population in Greece. Although the results showed that metric features of the radius, ulna, and humerus provided accurate estimates of sex, the skeletal remains were from Greece and thus may not be appropriate for forensic applications within United States populations (Charisi et al., 2011).

The purpose of this research was to compare two intrinsically different samples: the Texas State University Donated Skeletal Collection and the collection used in the Spradley and Jantz study. The sample from the Spradley and Jantz study came from the Forensic Anthropology Data Bank (FDB). The FDB is comprised of donated individuals as well as individuals from forensic cases associated with events

"The sheer number of unidentified and missing people within the United States has been called a silent mass disaster."

in all populations males appeared to have larger coxae than females (Betti, 2014). However, it is important to note that populations may differ in size. This is referred to as inter-population variation. Sexual dimorphism between males and females in one population may be great, while in another they may be slight. Intra-population variation refers to sexual dimorphism variations within a single population

such as homicide, which usually involve younger, more suspicious deaths (fac.utk.edu/databank.html). Skeletons from non-forensic donated collections, like in the Texas State University Donated Skeletal Collection, mostly died from natural causes and their age-at-death is much higher, with the average age-at-death being 65 as of 2015 (Sophia Mavroudas, personal communication, May 4, 2015).

This study was performed to ascertain if Spradley and Jantz's methods can be used on other skeletal remains from white individuals across another region of the United States. This was done by implementing their methods for individuals from the Texas State University Donated Skeletal Collection. Whether regional variation exists or not between the two samples will also be examined.

Another goal of this research was to compare the sexing accuracy of the radius, femur, and scapula with the Texas State University Donated Skeletal Collection to those results found among the same postcranial elements in Spradley and Jantz's research. This will act as a validation study to help contribute to existing research on estimating sex with postcranial bones. The Scientific Working Group for Forensic Anthropology (SWGANTH) stresses the importance of studies to replicate and verify work done by others. These validation studies ensure methods utilized in forensic cases are accurate and reliable.

The accuracy of sex estimation methods is very important. Sex estimation is often one of the first steps in completing a biological profile. If the sex of an individual is inaccurately estimated due to invalid studies and methods, the missing person may not be identified. As missing persons lists include both male and female categories, incorrect sex estimation can hinder all future efforts to identify an unknown individual.

The National Missing and Unidentified Persons System (NamUs) is a website that has options to input missing persons information by anyone with a missing persons report. It also has options for professionals, such as

forensic anthropologists, to input data about unidentified individuals. Families of missing persons can search for their loved ones on this site by viewing the information put forth by biological profiles. They also have the opportunity to see any personal items the unidentified person may have had with them at the time of their death. Again, if the biological profile information is incorrect, particularly the sex, the families of missing persons will never find them.

The sheer number of unidentified and missing people within the United States has been called a silent mass disaster. According to Nancy Ritter's (2007) *Missing Persons and Unidentified Remains: The Nation's Silent Mass Disaster*, there are approximately 100,000 missing persons currently in the United States. She writes, "more than 40,000 sets of human remains that cannot be identified through conventional means are held in the evidence rooms of medical examiners throughout the country" (Ritter, 2007:2). Ritter also mentions that because there are so many missing persons, law enforcement is often unsure of what to do with them (or medical examiners simply do not have room for them), which results in missing persons being buried in unmarked graves without having DNA samples taken from them. Forensic anthropologists are needed to identify the remains in these unmarked graves. Although a slow process, with validated methods for sex estimation and improvement in other identification practices, more people can be identified accurately and at a faster pace.

Materials

The sample for this research consisted of 56 individuals (21

females and 35 males) from the Texas State University Donated Skeletal Collection. As the Texas State University Donated Skeletal Collection is comprised of mostly elderly individuals, anomalies such as severe bone damage, gross pathologies, or bone prosthetics and implants were present in many skeletons. Since these were excluded from the study, it lessened the size of the sample.

The individuals used in the study were of a wide age-at-death range, but no sub-adults were utilized. It is very difficult to estimate the sex of a sub-adult, as many secondary sex characteristics do not show up until after puberty occurs (DiGangi and Moore, 2013:91), and these high error rates could potentially distort the data. All of the donations measured were born in the 20th century, and thus are considered to be modern forensic specimens. The modernity of each sample is important, because any individual that is not population-specific (for example, someone born in the 19th century who was much shorter than the modern-day average) would alter the results.

It is important to note that only self-reported white individuals were used in this research due to the limited sample size and the fact that the Texas State University Donated Skeletal Collection receives white donors much more frequently than any other group. Including only white individuals also controlled for any variability due to ancestry. Although Spradley and Jantz (2011) included both American blacks and whites in their study, only the white population data was taken into account when comparing their data with that of the Texas State University Donated Skeletal Collection.

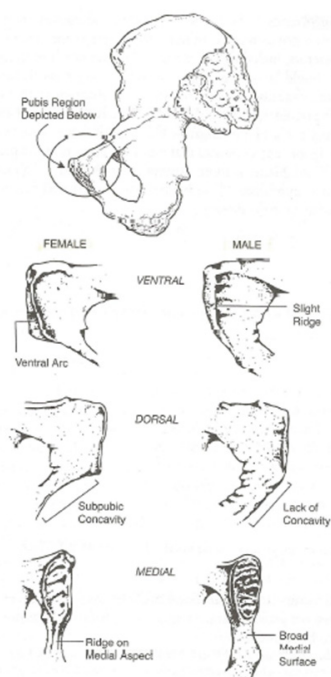


Figure 1

Sex differences in the subpubic region: Phenice's technique for sex determination. Drawing by Zbigniew Jastrzebski (after Buikstra and Mielke 1985; Phenice 1969).

Source: Buikstra JE, Ubelaker D. 1994. Standards for data collection from human skeletal remains: Proceedings of a seminar at the field museum of natural history. Fayetteville: Arkansas Archeological Survey Research Series No. 44.

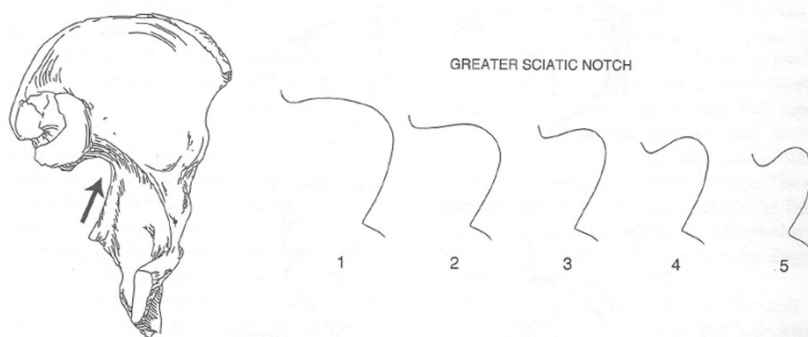


Figure 2

Sex differences in the greater sciatic notch. Drawing by P. Walker.

Source: Buikstra JE, Ubelaker D. 1994. Standards for data collection from human skeletal remains: Proceedings of a seminar at the field museum of natural history. Fayetteville: Arkansas Archeological Survey Research Series No. 44.

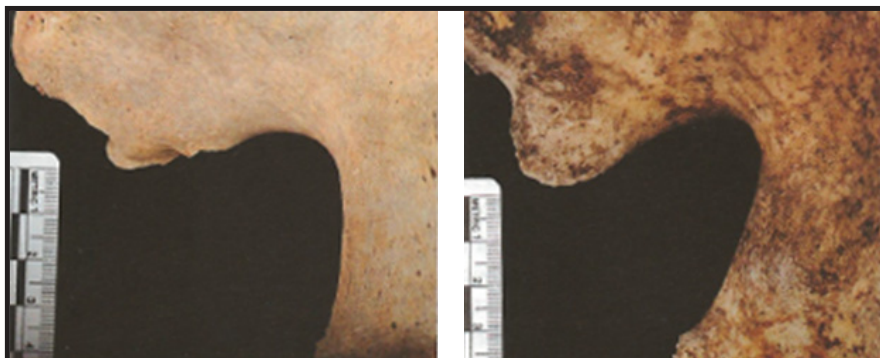


Figure 3

Sex differences in the greater sciatic notch.
Left: Wide sciatic notch (score = 1; female)
Right: Narrow sciatic notch (score = 5; male)

Source: Tersigni-Tarrant MA and NR Shirley. 2013. Forensic anthropology: An introduction. CRC Press, Boca Raton, FL.

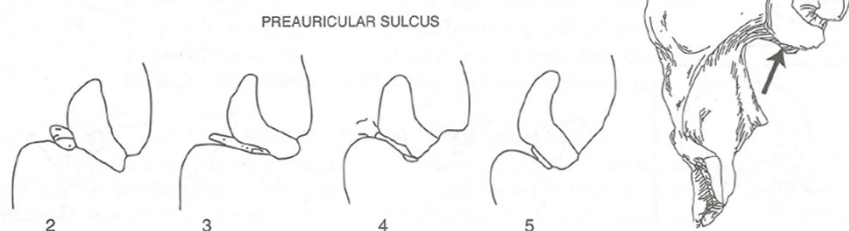


Figure 4

Scoring system for preauricular sulcus. Drawing by P. Walker (after Milner 1992).

Source: Buikstra JE, Ubelaker D. 1994. Standards for data collection from human skeletal remains: Proceedings of a seminar at the field museum of natural history. Fayetteville: Arkansas Archeological Survey Research Series No. 44.

Standard sliding and spreading calipers were used as well as an osteometric board and metal measuring tape.

Methods

In total, 14 measurements were taken (two for the scapula, three for the radius, and nine for the femur) for each of the 56 individuals. The exact measurements taken can be seen on Table 1. The measurement definitions from *Standards for Data Collection from Human Skeletal Remains* were used (Buikstra and Ubelaker, 1994:79-83). Only the left side of each skeleton was measured to remain consistent for each individual measured. If an anomaly existed that would potentially distort the data, such as metal implants or gross pathological conditions, the right bone was used. Skeletons with anomalies on both sides were excluded from the study. Figures 5-11 display examples of bone measurements.

Univariate methods of sex estimation were used with sectioning points to establish the classification rate of each individual and estimate if they were male or female. The sectioning points were established for each measurement by taking the means for both males and females, adding them together, and dividing by two. The sectioning points were then used to see which individuals for each measurement fell below that number (for females) or above that number (for males). The number of correctly classified individuals was then taken and divided by the total number of males or females to determine the classification rate for that specific sex. The classification rate is the percentage of males and females that were correctly classified by a specific measurement. To determine the classification rate

for both sexes combined, each sex-specific classification rate was added together and divided by two (Spradley and Jantz, 2011).

Results

Overall, the sex estimation results found among the Texas State University Donated Skeletal Collection follow a similar pattern to those found in Spradley and Jantz's research. The smallest difference between Spradley and Jantz's results and the Texas State University Donated Skeletal Collection fell under both the scapular breadth and femur midshaft circumference measurements (1%), while the largest difference fell under the femur transverse subtrochanteric diameter measurement (17%). The most accurate measurement for estimating the sex of an individual turned out to be the scapular height (89%) for Spradley and Jantz and the femur epicondylar breadth (91%) for the Texas State University Donated Skeletal Collection. The least accurate was the femur sagittal subtrochanteric diameter (69%) for Spradley and Jantz and the femur transverse subtrochanteric diameter (54%) for the Texas State University Donated Skeletal Collection. Refer to Figure 12 and Table 1 below for details of these classification rates.

Discussion

Although the majority of the classification rates in this study were similar to Spradley and Jantz's research, a few were inconsistent, including the Radius Transverse Diameter, Femur Sagittal Subtrochanteric Diameter, and Femur Transverse Subtrochanteric Diameter measurements. There are a number of possible reasons for this inconsistency. The sample used by Spradley and Jantz came from the Forensic Anthropology Data

Bank (FDB), which consists of a much larger sample size than the 56 individuals used in this study. Not only was there a large numerical difference in sample size, but the FDB sample is intrinsically different from the Texas State University Donated Skeletal Collection. Forensic cases, such as those in the FDB, are associated mostly with homicides, which involve younger, more suspicious deaths. Those who are a part of a donated collection usually died from natural causes, and their age-at-death is much higher, as discussed previously. The Texas State University Donated Skeletal Collection is known to house older individuals. Because of their age, the skeletons in donated collections will oftentimes look significantly different from those younger persons in the FDB. Bones change as an individual gets older. For example, shaft diameters of long bones get thinner in some individuals and pathologies, such as osteoarthritis or osteoporosis, can form (Roberts and Manchester, 1995). This can ultimately skew the data and produce inaccurate or inconsistent results. It should also be noted that the FDB is comprised of mostly individuals from the Southeastern United States (Spradley and Jantz, 2011). Lastly, Adams and Byrd cite subtrochanteric femur measurements as having a high inter-observer error, which could account for the greatest differences in classification rates of these metrics (Adams and Byrd, 2002). This high inter-observer error may be due to the subtrochanteric femur measurement definition in *Standards for Data Collection from Human Skeletal Remains* (1994) being vague and unclear. For future studies, it may be a good idea to avoid using this measurement until it is either

excluded completely or defined more clearly.

Some patterns in measurements were observed among the classification rates. There were some height and length trends among the Scapular Height (89%) and Radius Maximum Length

(86%) demonstrating that these measurements yielded more accurate results than their counterparts in Spradley and Jantz's study. Scapular Height and Radius Maximum Length are similar in that they measure the length of the bone, which could account for their high classification rates as opposed to Scapular Breadth (84%), Radius Sagittal Diameter (73%), and Radius Transverse Diameter (72%) measurements. However, although length measurements in the scapula and radius did well, femoral length measurements did not. The Femur Maximum Length came

out to only 80% and the Femur Bicondylar Length came out to 82%. Femoral joint surfaces, such as the Femur Epicondylar Breadth (88%) measurement and the Femur Maximum Head Diameter (88%) measurement, performed much better than femoral length. However, the femoral length measurements achieved exceedingly better results than femoral shaft dimensions (femoral shaft dimensions can be seen on Table 1 for measurements 10-14). The Texas State University Donated Skeletal Collection classification rates follow

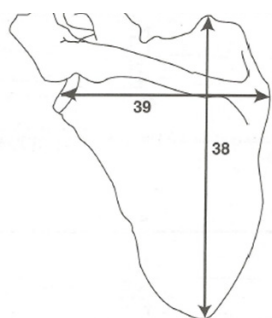


Figure 5

Measurements of the left scapula, dorsal view (after Moore-Jansen et al. 1994).

Source: Buikstra JE, Ubelaker D. 1994. Standards for data collection from human skeletal remains: Proceedings of a seminar at the field museum of natural history. Fayetteville: Arkansas Archeological Survey Research Series No. 44.

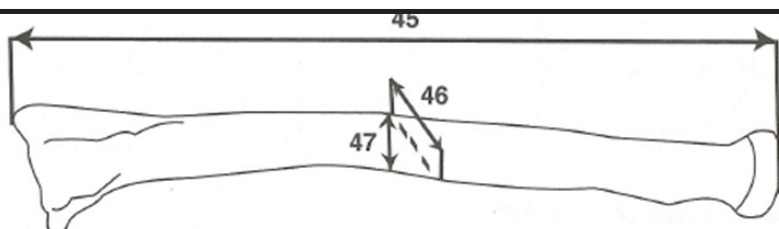


Figure 7

Measurements of the left radius, anterior view (after Moore-Jansen et al. 1994).

Source: Buikstra JE, Ubelaker D. 1994. Standards for data collection from human skeletal remains: Proceedings of a seminar at the field museum of natural history. Fayetteville: Arkansas Archeological Survey Research Series No. 44.



Figure 6

Scapular height being measured with sliding calipers

Source: Simone Longe 2014



Figure 8

Radius maximum length being measured on an osteometric board

Source: Simone Longe 2014

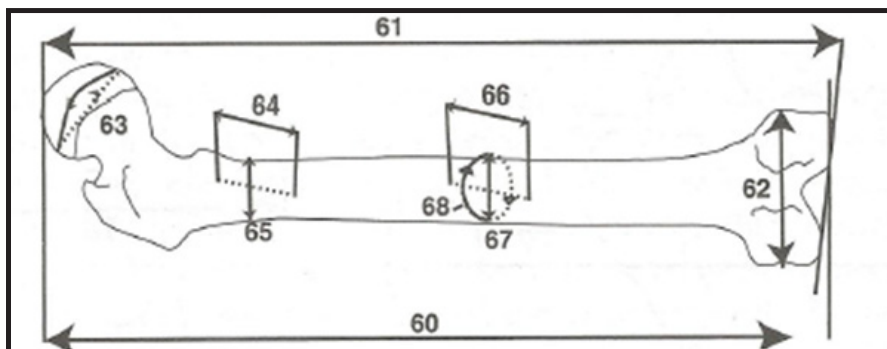


Figure 9

Measurements of the left femur, posterior view (after Moore-Jansen et al. 1994).

Source: Buikstra JE, Ubelaker D. 1994. Standards for data collection from human skeletal remains: Proceedings of a seminar at the field museum of natural history. Fayetteville: Arkansas Archeological Survey Research Series No. 44.



Figure 10

Femur maximum length being measured on an osteometric board

Source: Simone Longe 2014

similar patterns.

It is always imperative that a population-specific sample be used. The Scientific Working Group for Forensic Anthropology discusses the importance of using current data and methods for population groups that represent real forensic cases (SWGANTH, 2010). For example, it would be invalid to use data for Hispanic individuals for a study



Figure 11

Femur maximum head diameter being measured with sliding calipers

Source: Simone Longe 2014

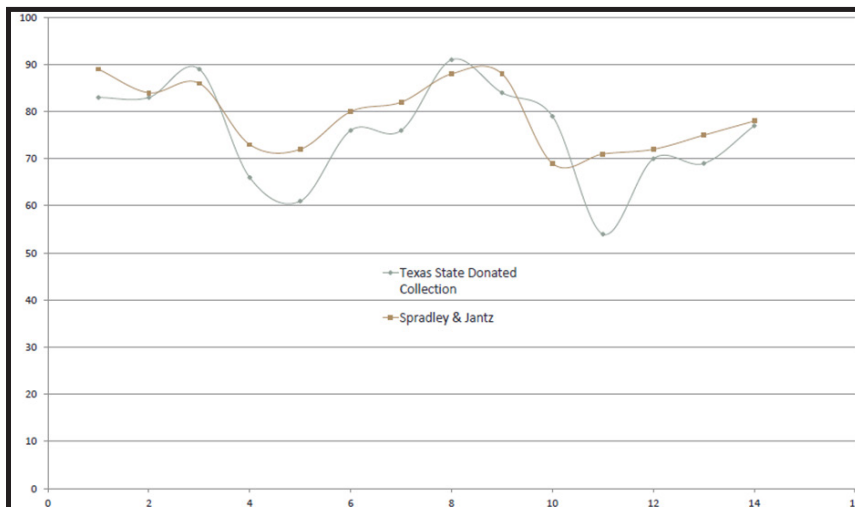


Figure 12

Shows the classification rates in scatter plot form with the classification rate percentages on the y-axis and the corresponding measurement number on the x-axis (see Table 1). One can see the overlap, increases, and decreases in measurements for both Spradley & Jantz (brown) and the Texas State University Donated Skeletal Collection (gray).

done on white individuals (Spradley et al., 2008). Since the Forensic Anthropology Data Bank and the Texas State University Donated Skeletal Collection samples used in this study and the Spradley and Jantz study provided similar results, it can be concluded that both samples may be considered population-specific for white individuals in the United States.

Future research in sex estimation using postcranial elements is needed to fine-tune this area of

the biological profile. Larger sample sizes and the inclusion of different collections within the same population could improve the accuracy of results. For sex estimation using postcranial elements specifically, more measurements should be taken in order to compare them with the rest of the skeleton to supply more robust methods.

Conclusion

This study's purpose was to compare the accuracy of sex

estimation for the radius, femur, and scapula found in Spradley and Jantz's (2011) research to the Texas State University Donated Skeletal Collection. This study also sought to see if intrinsically different samples, the FDB and the Texas State University Donated Skeletal Collection, would provide similar results. As both studies yielded similar results, the formulate put forth by Spradley and Jantz can be used on other skeletal remains from white individuals within these two databases.

The results show that most of the classification rates for white males and females between the two samples were similar. There were three measurements, however, that showed significant differences, including the Radius Transverse Diameter, Femur Sagittal Subtrochanteric Diameter, and Femur Transverse Subtrochanteric Diameter measurements. More research should be conducted to help perfect postcranial sex estimation and validate more sex estimation studies. This can include, but is not limited to, validation studies with higher sample sizes or performing validated methods on different samples around the United States and beyond with both population-specific samples and non-population-specific samples. Expanding on already existing research is key to increasing the number of approved methods forensic anthropologists can use not only for sex estimation, but in other areas as well.

Postcranial sex estimation is important because forensic anthropologists encounter unidentified individuals with missing pelves on a regular basis. In order to identify these missing persons, their sex should be estimated through the use of postcranial elements, since it

	Measurement	Spradley & Jantz Classification Rates	Texas State Donated Collection Classification Rates
1	Scapular Height	89%	83%
2	Scapular Breadth	84%	83%
3	Radius Maximum Length	86%	89%
4	Radius Sagittal Diameter	73%	66%
5	Radius Transverse Diameter	72%	61%
6	Femur Maximum Length	80%	76%
7	Femur Bicondylar Length	82%	76%
8	Femur Epicondylar Breadth	88%	91%
9	Femur Maximum Head Diameter	88%	84%
10	Femur Sagittal Subtrochanteric Diameter	69%	79%
11	Femur Transverse Subtrochanteric Diameter	71%	54%
12	Femur Sagittal Midshaft Diameter	72%	70%
13	Femur Transverse Midshaft Diameter	75%	69%
14	Femur Midshaft Circumference	78%	77%

Table 1

Classification rates for each measurement in Spradley & Jantz vs. Texas State University Donated Skeletal Collection

has been shown through Spradley and Jantz's research that the skull is much less accurate. With improved methods of estimating sex, these unidentified individuals have a higher chance of being crossed off missing persons lists and returned to their families.

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