

ideaFest: Interdisciplinary Journal of Creative Works and Research from Humboldt State University

Volume 1 *ideaFest: Interdisciplinary Journal of Creative Works and Research from Humboldt State University*

Article 1

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An aerial photograph of the Humboldt State University campus and surrounding area. The image shows a mix of green fields, residential areas, and university buildings. In the background, there is a large body of water (Humboldt Bay) and distant mountains. The sky is clear and blue.

ideaFest

Interdisciplinary Journal of Creative
Works and Research at
Humboldt State University



Interdisciplinary Journal of Creative Works and Research

Humboldt State University

Volume 1 | Fall 2016

Mission:

To promote scholarship, writing and other forms of creative production for readerships beyond the classroom at Humboldt State University, guided by the belief that publishing is an important part of interdisciplinary higher education; and to showcase the knowledge production and creative output of members of the Humboldt State University community.

Aims and Scope:

ideaFest: Interdisciplinary Journal of Creative Works and Research from Humboldt State University publishes a wide range of research articles, interviews, visual arguments, and creative works from across the disciplines. It is meant to represent the diversity of scholarly and creative output at Humboldt State University. The journal showcases the work of undergraduate and graduate students, alumni, faculty, and staff from Humboldt State University.

A Note from the Editors:

As the inaugural editors for *ideaFest Journal*, we are so grateful to have had the opportunity to help create a space for the students, staff, and faculty of Humboldt State University to share their work with a wider audience. We feel lucky to have had the chance to collaborate with the reviewers, administrators and authors who have contributed to the journal. We'd like to thank the Dean of the University Library, Cyril Oberlander, for his work in launching the journal as well as Paola Rodriguez Hidalgo and Amy Rock for their willingness to review submissions. Their insights and suggestions were invaluable. We'd especially like to acknowledge Janelle Adsit for her dedication to this project. She has guided us every step of the way.

We want our readers to know that we tried our best to incorporate the ethics and practices of Intersectional Feminism into the editing process. We acknowledge that there may be gaps in our attempt to incorporate a multiplicity of voices and perspectives. We hope that future editors will also continue in this vein and we look forward to seeing how the journal will grow in years to come.

Best Wishes,

Jade Mejia and Cassandra Curatolo

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Kylie Mosbacher

What is Love?: A Needs Assessment to Identify a Relevant Teen Dating Violence Education Curriculum for a High School

Nicole Pina

Introduction

Adolescence is the time of life when significant romantic relationships are first beginning to develop. A recent survey conducted by the Centers for Disease Control and Prevention¹ found that 73.9% of high school students reported involvement in a romantic relationship in the preceding twelve months. One in three teenagers experience verbal, emotional, physical, or sexual abuse from a dating partner and dating violence appears to be the most common form of youth violence.² There are many devastating short-term effects of dating violence that negatively impact the physical, psychological, emotional, behavioral, and social functioning of teen victims.

There is strong evidence that adolescents involved in dating violence are at a higher risk of further violence in future relationships and intimate partner violence escalates over time.³ Attitudes and ideas concerning relationship behaviors and dating are being formed during an adolescent's first experiences with intimate relationships. Statewide statistics are consistent with nationwide numbers of teens experiencing violence in intimate partner relationships. Among California's 11th grade students, 8.2% reported being physically hit, slapped, or physically hit on purpose by their partner in the last twelve months.⁴ Among high school students in Humboldt County, 5.9% reported as having experienced dating violence in the past year.⁵ It can be speculated that these numbers are an underestimate of the actual numbers of teens who will experience violence from a partner due to lack of education about what behaviors can be considered abuse, fear of punishment from family, or social isolation from peers.

Schools provide an excellent venue for dating violence prevention programs since a large percentage of this age group can be reached in one location. Schools are also a place where many teens will meet and spend time with their friends and dating partners. Peer relationships take on a much greater importance during adolescence as they continue to separate themselves from parents and establish independence as developing adults. The social norms of a peer group can either encourage abusive relationships and violence (i.e. by the blind acceptance of rigid gender stereotypes) or they can encourage healthy relationships and peer support.⁶

This project is a needs assessment and recommendation of a peer education curriculum that helps to prevent teen dating violence through education and peer mentoring. Teenagers are far more likely to reach out to their peers for feedback and advice than to their parents, teachers, or other adults. For teen dating violence programs to be truly effective, they have to empower teenagers to become leaders and role models in their communities. Adolescents have to be provided the tools, education, and encouragement to take a stand against dating violence and assault and to provide positive peer support. High school students, particularly older ones, demonstrate a clear desire to step into adult roles and responsibilities and are often ready to embrace opportunities to become effective leaders in their community.

Review of Literature

Many school-based programs aimed at preventing teen dating violence exist and show positive long-term impacts.⁷ Many of the programs implemented for older youth focus on teaching individual students healthy dating relationship skills. Educational programs are crucial because of the prevalence and impacts of teen dating violence. Exact numbers are impossible to determine, but estimates of teen dating violence range anywhere between 21-45%.⁸ Adolescents who experience intimate partner violence may run the highest risk of being abused or committing abuse later in life.

Mid-adolescence is a critical time to educate youth about healthy expectations and boundaries in intimate partner relationships.⁹ Young people in this age range may not identify certain behaviors as dating violence, such as jealousy or controlling actions of a significant other. The norms, beliefs, and attitudes of a teen's peer group about dating have a huge influence on an adolescent when they have intimate relationships. Some forms of verbal and emotional abuse may be considered accepted by a teen's peer group. The peer group tends to set the social rules of dating among this age group and may be the most strategic inlet to spread information and give advice to youth.¹⁰

The *Expect Respect* program began when school counselors recognized the need for services for girls in abusive relationships.¹¹ The program had to be adapted from previous work with adult battered women to fit the unique needs of adolescents. A major consideration in the restructuring of the program was the impact of peer relationships on romantic relationships. The program addresses risk factors that may be associated with teen dating violence, such as unhealthy gender norms that promote male dominance, acceptance and justification of violence among peers, negative role models, trauma, and lack of social skills.

An evaluation of the effectiveness of the program demonstrated an increase in healthy conflict resolution behaviors among participants over the course of the intervention.¹² The study of the *Expect Respect* program showed that among the support group participants, there is a subgroup that already experience or perpetrate violence in their relationships. The subgroup of teens that had already experienced a significant reported significantly less victimization and perpetration, suggesting that they received the most benefit from the ongoing emotional support and positive peer relationships.

According to Weisz and Black¹³, agency directors and staff who have implemented peer education for teen dating violence prevention have witnessed distinct advantages to having peer role models. Young people can convey information and communicate the message using the language of their peers. Youth are far more likely to turn to peers for advice and help when experiencing dating violence. Peer educators are far more accessible than professional presenters and increase the number of students that can be reached. Peer education and leadership programs also empower students by teaching better communication and relationship skills.

The *Youth Advisory Committee* is a school-based youth-driven teen dating violence prevention project in rural Wisconsin.¹⁴ The primary objectives are to offer students an opportunity to plan educational presentations and activities, develop awareness of unhealthy gender norms that promote violence, identify positive coping skills, and promote healthy relationships in their environment. Another goal of the Youth Advisory Committee class is to increase appropriate responses when someone is speaking in a sexist or violent way.¹⁵ Teaching teens to respond when a friend confides that they are experiencing intimate partner abuse is also critical since teens mostly turn to other teens for help.¹⁶ Common barriers to seeking help from adults were fears of punishment from their parents or involvement with school authorities or law enforcement. Programs need to provide adequate training and assistance to adolescents who

are put into these situations.¹⁷

Although putting youth in leadership positions is empowering, respects their capabilities and talents, and makes the program more relevant to its intended audience, there are formidable challenges involved in running youth-driven teen dating violence prevention projects.¹⁸ Although teens may offer tremendous enthusiasm and energy to the project, they may also bring their own troubling issues that require a great deal of support from adults. Many of the peer educators in the evaluated programs had experienced violence themselves and had difficulties presenting the sensitive subject material.¹⁹ According to Weisz & Black²⁰, programs seemed to address this concern by adequately screening the peer educators beforehand and providing very close supervision. Training of peer leaders has to be sufficient and closely monitored. Inadequate training of peer leaders results in peer educators who feel incompetent or who run the risk of providing limited, or even harmful, knowledge to their peers.

Cultural norms and beliefs that accept violence in intimate relationships and model relationships based on power and control are a major risk factor that increases teens' vulnerability to dating violence.²¹ Risk factors permeate all levels of a youth's social environment and come from their home, community, school, and peer group. Prevention efforts must be addressed from an ecological perspective to address all levels that influence youth dating attitudes and behaviors. The goals of the Expect Respect program and youth-driven school-based teen dating violence prevention programs are to change the social norms about dating relationships on all environmental levels, develop teen leadership, create a positive and respectful school environment, provide support for at-risk students, and teach skills for healthy relationships. Another benefit to encouraging youth participation and leadership in these programs is youth can provide meaning relevant to their own ethnicity and culture. This includes not just ethnic culture, but also the influence of popular youth culture.

Peer education programs are considered a cutting edge component of school-based teen dating violence prevention programs and an effective way to keep program content fresh and relevant to diverse communities of youth.²² The programs that demonstrated the highest success in meeting their goals provided curriculum across multiple sessions. Despite the challenge of providing sufficient resources to conduct peer education and offering adequate training and support for peer educators, most teen dating violence prevention programs are likely to include peer education components in the future. Peer education and leadership has been shown to be empowering, respectful of youth as agents of change, and a way to keep information relevant to its intended audience.

Methods

Overview

The purpose of this project is to conduct a needs assessment and recommend a curriculum for teen dating violence awareness and education that is informed by scholarly literature, input from professionals working directly with youth, and perspectives from the age group being targeted. This section is organized to describe the population served, information and materials needed to create the curriculum, project methods, relational accountability. This section ends with a description of the limitations of the project and ethical considerations.

Population Served

The population served by this project consists of an average of 1,200 students who attend a local high school. The curriculum will be targeted towards 9th grade students attending health class, but may also include older students outside of class. The staff who are intended to use the curriculum will be teachers, school counselors, or interns who are interested in educating teens about healthy intimate

relationships and will continue to develop a relationship with the students throughout the school year. Several teachers and school staff have expressed an interest in implementing the project in their direct work with high school students and creating a safe space to open dialogue about relationships and dating violence

Overview of Information and Materials Needed

This section describes the information and materials used to develop the project. The curriculum recommended aims to educate high school youth about intimate partner abuse, the signs of healthy and unhealthy relationships, and how to support peers who may be experiencing dating abuse.

The recommended curriculum was informed by the interview process, data from the youth focus group, scholarly literature, and my experience working with high school age youth, and experts in the field. The interview process and the data from the focus group directly informed what was to be the focus for the content based on desired outcomes.

Project Methods, Relational Accountability

Data were gathered from professionals (n=6) in the community who have worked with clients and systems serving youth and survivors of intimate partner violence through interviews. Data was also gathered from teens (n=22) that participated in a focus group. I was relationally accountable to the community by using the results to provide recommendations for resources and a curriculum for use in the high school health class and by incorporating client (high school age youth) feedback into the development of the curriculum.

Professional interviewees were selected for interviews via expert sampling. Interview questions I designed were based on open-ended questions regarding education about the topic to youth and young adults. Interview length averaged thirty minutes. The professional interviewees were allowed to share answers in an unstructured format to create an opportunity to give feedback based on their personal and professional backgrounds. The focus group youth were recruited from a high school psychology class. The focus group had a nearly equal balance of males and females. The youth were asked a series of open-ended questions based on the topic. The interviews and the focus group were recorded by hand and all information was later transcribed to an electronic format.

Analysis of the interview and focus group data results employed a general inductive approach (GIA)²³ to analyzing qualitative data.²⁴ I read through the interview and focus group question data and identified major themes that emerged in the answers. I created a chart with major themes and placed shorter descriptive answers from each interview or the focus group underneath the topic. I looked for overall patterns, but also took note of differences between the professional interviews and the teen focus group answers. During this process, I also identified key quotes that could be helpful in the curriculum development.

Ethical Considerations

An ethical consideration to take into account was working with a vulnerable population. Since I held a focus group with minors, I had to receive parental consent forms for participation. I also had to provide safeguards in the case that the minors might experience distress with the subject matter. All participants were advised that the focus group was voluntary at all times and they could debrief with a school counselor if they needed. The professional interview questions were not of a personal nature, and did not cause any distress for the interviewees.

The benefits of this project will be the recommendation of a healthy relationships and teen dat-

ing violence prevention curriculum that will be implemented in a local school. The potential risks were that youth participants might have been distressed by subject matter involved in the focus group and potentially breach confidentiality of personal information. I was unable to guarantee confidentiality for students who participate in the focus group because their peers will be present and I am unable to control what is said outside of the focus group.

For the purposes of this project, I knew the identity of the professional participants, but nobody else did. The participants of the focus group knew each other beforehand, but no identifying information was used in recording the data. The data made publicly available via this report are included in a summarized format without any identifying information. Data from the interviews and the focus group were maintained until the project was completed. Data were recorded via written notes during interviews and stored in a locked cabinet within a locked room. The data were then transcribed into a computer, at which point the written form was destroyed. After the project was completed, the electronic data were deleted from the computer storage.

Results

Six professionals (n=6) who work or have previously worked with educating youth about intimate partner violence and dating were interviewed for their insight and perspectives regarding effective education, awareness, and prevention of teen dating violence. All of the professional interviewees were asked the same questions initially, but were prompted to provide more information based on their specific experience and background. The focus group at the high school consisted of 22 (n=22) youth between the ages of 15 and 18. The questions asked in the focus group differed from the questions asked of the professionals. The questions in the focus group were geared towards the adolescent participants' personal experiences and attitudes towards intimate partner relationships. All participants stayed from beginning to end of group and interviews.

The data collected from both the professional interviews and the focus group varied in perspective, but some common themes were identified in the analysis of both the focus group answers and the answers from the professional interviews. Common themes included strong attachment and loyalty to peer groups, the need for multilevel approaches to dating violence awareness with teens, the normalization of unhealthy gender role stereotypes and unhealthy relationship dynamics as portrayed in the media, heavy significance of social media behavior in teen relationships, and learned relationship behaviors from family.

Peer Loyalty

Adolescents are extremely loyal to friend groups and the peer-to-peer model is most effective when utilizing the friend group. Results from the focus group and the professional interviews emphasized a strong loyalty to friends during adolescence and the need for a genuine relationship to already exist for a teen to trust someone for support when experiencing intimate partner abuse. Peers are more accessible, more relatable, and more easily accessed through social media and everyday life than most adults in an adolescent's life. One teen expressed during the focus group that "my responsibility as their friend is to let them know I can help." Peer check programs that teach adolescents skills to support friends have demonstrated success with this age group.

Multilevel Approaches

Three of the professionals interviewed stressed that one time trainings are not as effective as building trusting relationships with teens and teaching teens support methods that they can use with their peers. Trainings were not effective unless the concepts were applied and the students were engaged with

ongoing dialogue and receive messages from multiple sources. Role playing, art, group discussions, peer mentoring, and social media can all be used to educate high schools students about dating violence. One professional interviewed stated that teens and adults needed to “keep the conversation going.

Media Portrayal

Unhealthy relationship behaviors and gender role stereotypes are often normalized in the media. Media shows examples of relationships that frequently depict dominant men and submissive women roles, normalize cheating and distrust for an intimate partner, and glorify sex as the most important component of a relationship. “Everyone cheats and you can’t trust your partner,” one high school student described most representations of relationships in movies and television. Some of the teens in the focus group expressed that media often shows unrealistic examples of relationships, which are often polarized as really good or really bad.

Digital Technology

Digital technology plays a significant role in dating abuse among teens. Social media outlets are a new venue widely used by teens that can also be used in verbal and psychological abuse or as a source of intimidation. Two professionals interviewed strongly suggested teaching teens about safety tips surrounding social media. “Sexting”, the use of “snap chat” to send photos that disappear in 30 seconds, and social networking sites were all mentioned in the teen focus group. One teen mentioned that their friends may not be aware that calling or texting an intimate partner constantly, breaking into their email or Facebook account, or using nude photos on social media as blackmail could be considered abuse.

Influence of Family

Family role models impact an adolescent’s experience of intimate partner violence and views on intimate relationships. The professionals interviewed and the teens in the focus group agreed that an adolescent’s modeling of intimate relationships from family members shapes their opinions, but had slightly different views on the matter. The professionals interviewed felt that teens often mimicked the relationship behaviors of their family members, particularly parents, and were also deeply impacted by cultural backgrounds. When asked about the role of family in shaping their views regarding intimate relationships, some of the teens participating in the focus group expressed those teens may mimic their parents’ relationship dynamics or be influenced to be different than their family. A few of the teens expressed how their family’s experience and views might not be helpful if their own relationships are unhealthy “We can be positively and negatively influenced by that,” said one teen.

Discussion

The results from the adolescent focus group and the professional interviews supported findings from peer reviewed research that teen dating violence education has to engage youth on multiple levels in order to be effective and peers are the most accessible forms of support in instances of dating abuse.²⁵ Given my current and previous work experience with adolescents, I was not surprised by the data results that strongly emphasized building relationships with teens and using their existing social network as a support system for preventing and intervening in adolescent intimate partner abuse.

I was unable to find peer reviewed research that spoke extensively about the use of digital technology in teen dating abuse, but believe this will be a topic that continues to gain more attention as the popularity of social networking sites continues to grow. I had a difficult time finding peer reviewed literature on peer mentoring for teen victims of intimate partner violence and only one of the professionals I interviewed had experience training young adults to support their friends who may be experience dating abuse.

A significant limitation I identified with this project was the relatively small sample size of students who participated in the focus group. The students were older high school age, primarily Caucasian descent, may have already had experience speaking about topics such as relationships in the psychology class and may not have accurately represented opinions of the majority of the high school population. It is impossible to know if the students may have shared more personal information or opinions regarding intimate partner relationships and dating violence in private or anonymously. In the future, I may consider anonymous surveys to allow a more private means to communicate answers to similar sensitive topics and to gather data from a larger number of participants.

Another limitation was the professionals' lack of direct experience working with the particular population of high school students for this project. Some of the professionals who agreed to be interviewed worked primarily with adolescents from different economic and/or ethnic backgrounds than the high school chosen for this project, which may inform their perspective differently than professionals working closely with a community similar to the population of the needs assessment. I may choose to only interview adults who work directly with the population served by the research in the future.

The curriculum itself is limited by what it can address, as it is an attempt to share a large amount of information on a broad topic in only two to three sessions. This topic would benefit from further discussion and rapport building with adults so high school students have a safe venue to share about their relationship experiences and how to support peers. A teacher or counselor who will be a consistent adult throughout the duration of their stay at the high school should facilitate the curriculum. The curriculum will also provide youth with other resources for more information and help.

Any curriculum would have to adapt to diverse cultures and backgrounds if used in a different school with a different population. The recommended curriculum may be used in a health class and its use will be at the discretion of the teacher. Parental permission may also be required for students to participate.

The data was analyzed using the general inductive approach (GIA) and which was used to inform the recommendation for an appropriate teen dating violence curriculum for use at the high school.²⁶ The curriculum I chose to recommend for the high school is a program called *Love is Not Abuse: A Teen Dating Violence and Abuse Prevention Curriculum High School Edition*.²⁷ The results from the needs assessment showed a need for multilevel approaches to actively engage teens in the educational material. I chose this curriculum since it provides role plays and other interactive lessons to teach high school students about teen dating violence.

Peer loyalty is a strength among this age group and a tool to prevent teen dating violence. The recommended curriculum teaches youth how a bystander can help in situations where they are a witness to dating abuse. There are tools for the educator to help establish a peer educator group in the school. Interactive lessons encourage group discussions and critical thinking about how media and family influence young people's attitudes towards intimate partner relationships. There is also a section dedicated to the use of digital technology, such as social media and text messaging, in abusive relationships. This section also teaches safety tips for social media and digital technology in adolescent relationships.

A similar needs assessment for awareness, education, and prevention of teen dating violence can be done with any high school. From my experience doing a needs assessment with the adolescents in this particular high school, the culture of the school and the demographics of the students have a strong impact on their experience of intimate relationships and dating abuse. Even using a curriculum already developed must be adapted based on the culture of the students, particularly when discussing the influence of family on attitudes towards relationships.

The community partner, school crisis counselor, and school health teacher were particularly interested in this project to directly benefit the students of the high school since a curriculum for teen dating violence education was not currently being used and there was a noticeable need. I am very hopeful that the health teacher, crisis counselor, and/or a future social work intern at the school will use the recommended curriculum next year. The recommended curriculum is very comprehensive and the teacher, counselor, and/or intern will likely have to choose the most beneficial activities and modules to fit time constraints of teaching in the classroom.

Group dynamics and the way that the group is facilitated, will play a large role in how the curriculum is implemented. This consideration was addressed by forming relationships with those staff that are likely to promote the use of the curriculum in the future. These staff members are aware of the value of intimate partner abuse education for high school youth, and they had expressed a desire to implement the curriculum in a respectful and impactful way.

About the Author

One of Nicole's strongest motivations is to serve and advocate for people whose voice, needs, and goals need support. She has a strong calling to work with youth and collaborating with them to participate in community building programs and activities that help their own social and physical environments flourish. She has consistently maintained a dedication to helping the people she meets reach their potential and have greater faith in their own strengths and unique gifts, despite the obstacles each individual has survived. She would like to thank Jennifer Maguire, MSW, PhD., Marissa O'Neill, MSW, PhD., Jack Bareilles, Eileen Klima for their help on this project. Nicole can be contacted about her research at morningglory8282@gmail.com.

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Positionality and Feminisms of Women within Sufi Brotherhoods of Senegal

Georgia Collins

For this literature review I researched authorship concerning the positionality of women within the Islamic Sufi Brotherhoods of Senegal. Senegal is a secular country in West Africa with a 95% Muslim population. Lucy E. Creevey and Codou Bop assert that in comparison with women in many Middle Eastern countries, women in Senegal enjoy greater freedom of expression as well as freedom of movement.¹ “The position of women in Senegal on a superficial level seems to be one of relative equality with men, at least compared to women in many Middle Eastern countries.”² Bop states that “Although the population of Senegal has been in contact with Islam for centuries, Senegalese women, in fact, enjoy more freedom than do women in most Muslim societies.”³ Women can be seen and heard in all public spheres, day and night. Veiling is not a requirement, and many choose not to. Senegalese women are known as some of the most elegant in Africa, at ceremonies every woman wears a beautiful brightly colored dresses and often shows off intricate coiffures.⁴ However, Creevey and Bop argue that this is a superficial vision of equality and liberty and that, in reality, Senegalese women are still treated as second-class citizens; “Today, despite differences in the positions of individual women related to age, marital status, social class, and political involvement, it can be said that Senegalese women as a group do not hold high social status.”⁵

I became interested in this concept when I studied abroad in the capital city of Dakar for an academic year, and lived with a Senegalese host family. Senegalese women shattered my preconceived ideas of what it meant to be an African Muslim woman. The colonial discourses I had received throughout my life told me that these women were voiceless victims. From the start, I was surprised by the amount of autonomy these women seemed to possess as well as the freedom of opinion and movement they enjoyed. These women were not submissive or voiceless. These women move freely through space - yelling, laughing, chiding, flirting, very much visible and active. Living in a Senegalese home allowed me to see deeper into the complexities of Senegalese femininity and the role gender plays within the public and private sphere. In the home, women and girls perform the domestic work. These gender specific duties are ingrained and enforced. My host mother was a strong outspoken woman who was well respected within her community, yet she remained dutifully submissive. She was the caretaker of the house and family, and as expected, remained silent when my host Father spoke and worked while he relaxed. Having observed these contradictions my interest in Islamic African feminism in Senegal influenced me and my research for this literature review.

While resources on Sufi Brotherhoods in Senegal are plentiful, finding sources that discuss women's positionality within these Brotherhoods proved much more difficult. I was able to find seven sources, ranging from in-depth analysis to broad understandings of the intersections of feminism and Islam. *Feminism in Islam* by Margot Badran, *The Impact of Islam on Women in Senegal* by Lucy E. Creevey, as well as a very specific article detailing *Roles and the Positions of Women in Sufi Brotherhoods* by Codou Bop all informed my analysis. *Marabout Women in Dakar* by Amber B. Gemmeke, ‘*All Women are Guides*’: *Sufi Leadership and Womanhood among Taalibe Baay in Senegal* by Joseph Hill, *A Re-Shaping of Gender Activism in a Muslim Context- Senegal* by Rizwana Habib Latha, Mariama Ba's *So long a letter* and *The Educational Empowerment of Muslim Women* also by Rizwana Habib Latha and ‘*We Don't Want Equality; We Want to be Given Our Rights*’: *Muslim Women Negotiating Global Development Concepts in Senegal* by Nadine Sieveking were also very important in the shaping of this article.

Literature on women's roles and status within these Sufi Brotherhoods takes one of three positions. The first is that while Senegalese women have crafted spaces within the religious sphere and navigated these spaces with ingenuity and creativity, true and meaningful empowerment for women and

the promotion of women's rights is only possible through secular means. The second stance claims that through reexamination of the principles of Islam and its dominant interpretations that privilege men, feminists will be able to construct a new understanding of Islam that promotes gender equality on a grander scale resulting in liberation for all humans. The third stance expresses that the Sufi brotherhoods in Senegal allow women not only to occupy public spaces, but gain certain levels of religious authority. These authors do not believe that it is within the Brotherhoods alone that women will progress their status and liberty within society but that these spaces are significant and deserving of more interrogation. These authors believe that context-specific, strategic cooperation between women's rights groups and the political and religious will prove the most dynamic course to enhance the rights of all women in Senegal.

Introduction to Senegalese Sufi Brotherhoods

In order to better understand women's positionality within Senegalese Sufi brotherhoods, we must first gain some basic insight into the creation of and maintenance of the brotherhoods. A relatively large amount of scholarly attention has been given to the Sufi Brotherhoods in general, and the religious leaders especially, because they navigate a unique space between the political and religious spheres of Senegal. All of my sources acknowledged the large role these Brotherhoods play within Senegalese daily cultural functions. One cannot walk two blocks in any city or village without seeing reproductions of the fathers of Mouridism plastered or painted on buildings, cars, and buses, and horse-carts. There are four distinct brotherhoods within Senegal, the two largest being Mouride, founded in 1905 by Amadou Bamba Mbacke, Tijiane founded in 1902 by Al-Hajj Malick Sy, followed by the Qadiriyya thought to be founded around the end of the nineteenth century, and the smallest, the Layenne founded around the beginning of the twentieth century.⁶ Descendants of these founders make up the majority of the highest religious authorities within Senegal. There is a strict hierarchy within the brotherhoods starting at the top with the highest Khalif who is a descendant of the founder, followed by Marabouts who are appointed by the Khalifs and are almost always descended from the founding families as well. The base is made up of *talibes* (disciples) who devote themselves to their Marabout and support them through lip service, economic contributions, hosting religious events in the Marabout's honor, as well as working for free on his fields. Although it is said to be brought to the country around the 13th century, Islam itself became the most popular religion in Senegal at the turn of the 20th century when The Sufi Brotherhoods began in response to French colonial conquest.⁷ The *Khalifs* and Marabouts acted as a balm for the people who were suffering the material and epistemic violence of the French colonists. They offered the people an identifiable point of cultural distinction. Creevey states that "Many Senegalese have turned to Islam for affirmation of their national identity apart from the West."⁸ People still speak of Amadou Bamba, Al-Hadj Malick Sy and their family "as opponents of colonization and heroes of the nation and as the saviors of Islam in the face of the Catholic French colonizers."⁹ While at first these brotherhoods opposed colonial occupation, they developed an attitude of tolerance and cooperation, becoming the intermediaries between the colonial administration and the people. In return, these elite religious leaders and their families were given control over much of the groundnut production and trade, securing wealth and influence that is still visible today. Post-Independence, strong ties remain between the secular Senegalese state and the religious authorities. Marabouts still play a large role in the mediation between the state and the people. Marabouts support political candidates for office, and act as mediators in many economic exchanges as well as help settle such disputes as between trade unions and companies. Sieveking and Bop credit Senegal's political stability and peaceful status to this interdependent relationship.¹⁰

The Brotherhoods offer very specific anecdotes concerning women and their roles within the public and private spheres. It is very clearly stated that the path to reverence is through a life of piety and devotion to God and husband. While in reality each woman maneuvers her life uniquely, the admirable women in the Brotherhoods are the mothers of the saint-founders revered for their qualities of grace and submission to God and husband. A story I heard many times while living in Senegal focuses on Mame Diarra Bousso, mother of the saint founder of Mouridism, Cheikh Amadou Bamba. According to Hill's version of this story Mame Diarra's husband asks her to hold up the leaking roof of his reading room so that he can read his Qu'ran. He then falls asleep, forgetting her. Mame Diarra is said to have stood all night in the rain to hold up the roof for her sleeping husband.¹¹ This story is told to highlight the qualities

of a good woman. A song by popular singer Pape Diouf sings about Astou Dianka, the mother of Baye Niassé who “‘never fought and never harmed him [Baye]...she had no use for sitting around complaining...she never yelled or laughed out loud...Ever pure for her leader (husband), she never left without permission’”.¹² There is a yearly pilgrimage to the birthplace of Mame Diarra in Porokhane, Senegal. This is the only pilgrimage in Senegal dedicated to a woman. A beautiful village mosque is devoted to Mame Diarra and the water that flows from the well is said to be sacred and blessed by the holy mother. I was lucky enough to participate in the pilgrimage to Porokhane in January 2015, and was impressed by the relative percentage of women who had made the journey (in comparison to the ten or so other pilgrimages I took part in). The jubilation of the women was evident as they sang and danced for three days to devotional songs for Mame Diarra. I was continually congratulated on making the trip, and told that this pilgrimage was special because it was celebrating the sacredness of all women.

Bop, Creevey, Hill, Gemmeke, Sieveking and Latha agree that modern Senegalese conceptions of gender equality are constructed through the intersections of Islam, traditional values, and Westernization (the legacy of colonialism). They also all agree that there have been individual women who have risen within the Brotherhoods to positions of high esteem. The authors refer to Sokhna Magat Diop- a woman who was able to rise to the position of *Cheikh*¹³ and have her own *talibe*. Gemmeke mentions Sokhna Magat Diop and states that “she was a religious leader who appointed *imams* (leaders of prayer); owned land cultivated by her followers, and performed ritual prayers.”¹⁴ Bop states that “In Sufi ideology ascetic practices, abstinence, meditation, and mystical retreats or *khalwas* are crucial to accessing divine grace. Through her way of life Sokhna Magat Diop behaved according to Sufi requirements. Her mysticism seems to have overcome her limitations as a female and lifted her to sainthood. Because of her true Sufi behavior her disciples have been persuaded that she was as close to God as any other shayk and was gifted with strong and increasing *baraka* (divine grace) from which they would all benefit as well.”¹⁵

When discussing women’s organization within Senegal, Latha, Bop, and Sieveking believe it is imperative to discuss the concept of women’s groups or associations. These associations can be organized around a religious leader or as an independent entity. There is a long and strong presence of women’s groups or associations in Senegal, both in urban and rural areas. Some of these associations come in the form of *dahira* which “declares allegiance to a chosen marabout” and whose “role is to support him and to increase its own influence.”¹⁶ This support comes in the form of economic contributions to their marabout (mostly urban) or through uncompensated work in the fields of the marabouts. Bop states that “it is increasingly through these organizations that women have expressed their spirituality and widened their sphere of influence.”¹⁷ These associations can be very central to women’s lives and as Latha states “women’s increasing empowerment in the religious sphere is evident in the fact that the number of female-dominated *daairas* (*dahiras*) is growing.”¹⁸

There are also associations that are not devoted to a particular marabout, but that come together to organize ceremonies, rites of passage, as well as create possibilities for financial stability. My host mother was a part of a women’s group of sorts. Every month they would meet and discuss ways in which to collectively find forms of income. They pulled all of their resources and were able to begin selling *churai* (incense) and fresh bottled juices, and sharing the income from these endeavors. Latha states that “an important motivation in joining these associations is to mobilise resources through group action that offers material support as well as moral, and religious solidarity.”¹⁹ Later in the essay, I will explore the ways in which these women’s associations are used to forward women’s rights.

Advancement Through Secular Means

Bop states that “It is secularism and women’s empowerment through the defense and promotion of women’s political, economic, social, and cultural human rights that will change gender and class relations within Senegal society and will do so at a faster pace” [than Islamic Feminism].²⁰ Bop takes this position, stating that “it is through secularism and within secular, autonomous movements and in alliance with gender sensitive segments of society that Senegalese women will best be able to consolidate and expand changes in both the domestic and public spheres.”²¹

Although Creevey does claim that there is an inherent gender inequality within the Islamic doctrine, she does not suggest that women's empowerment is only possible through secularism. "Their legal status is subordinate. The testimony of one man is matched, for court purposes, by that of two women (Qur'an 3:283)...This clear second-class position of women in the scriptures and in the Qu'ran is part of the message that the teachings of Islam communicated to the Senegalese people when the religion was being spread."²² Bop argues that women are continually marginalized within the Brotherhoods regardless of what little autonomy and space they are given. She claims that women's participation in and centrality to much of religious life in Senegal does not make Islam the best route for change. She states that "women continue to be significantly excluded from decision-making spheres within religion and therefore lack the means truly to address their situation."²³ She also claims that that dominant religious ideologies dictate who receives epistemic privilege, and that there are many barriers keeping women from gaining meaningful religious authority. *Baraka* is the Islamic concept of divine grace, controlled by lineage and inherited through the male line. A woman can inherit Baraka through her father or male family members but it is seen as an inherently male trait. Baraka is what gives religious authority as it is seen as divine power given from God. Bop quotes Donal Cruise O'Brien "In the Sufi brotherhood, baraka still has the quality of grace, bearing the promise of salvation, but it also comes to be identified with worldly privilege, with wealth and power. The poor pay tribute in various forms to the bearers of grace, in hope of a charitable return as well as a passport to paradise".²⁴ Bop goes on to claim that "it is relevant to consider baraka as an ideological construction that legitimates the maintenance and permanence of a group of persons at the head of the system and the exclusion of others who, by their spiritual qualities, might claim to possess such grace. Baraka, a notion of spiritual grace, thus functions centrally in a system of power to ensure inclusion and exclusion."²⁵

Knowledge is important within all systems of hierarchical power --and Islam is no different. Bop writes "knowledge of sacred texts (the Qur'an, the hadiths, the tafsir) and of religious science, command of Arabic, outreach, and teaching have all been significant practices of the founders of the brotherhoods and their successors."²⁶ It is this specialized knowledge that garners trust and respect of an individual and it is this trust and respect from the community that deems them deserving of authority. Though Bop claims that knowledge is only for the already powerful in Muslim societies, it has also been used by women to refute the status quo. "[Knowledge] has empowered Muslim women to understand the discrimination they face and the social position to which they have been traditionally confined. It has enabled them to challenge biased interpretations of sacred texts and, within the brotherhoods, to confront the ideology that renders them marginalized."²⁷ The problem with this is that women are rarely granted the opportunity to learn the Qur'an let alone the hadiths. Literacy itself is an issue for women and most just do not have the opportunities that grant this specific knowledge.

The concept of impurity often limits women's power and access to religious ceremonies. Bop states that "Once more, a religious principle, purity, blocks women's access to knowledge and positions, denying them the possibility to ascend to places of greater leadership in the brotherhoods."²⁹ For instance, menstruating women cannot participate in any religious ceremonies, or lead prayer. "To perform religious practices such as prayers, *dhikr* recitation, pilgrimage, reading of the Qur'an, and the entering of sacred spaces such as mosques, a Muslim must be clean (*tahara*). As in all Abrahamic religions, women are believed to be unclean at certain periods of their life, such as during menses and bleeding after childbirth."²⁸ A woman cannot be counted on as a religious leader when one week of every month she is restricted in her movements and actions. As I will explore later in this article, the denial of menstruation is one strategy that women use to legitimize their religious authority.

The image of the "ideal" Sufi Woman is the third ideological construct that Bop claims obstructs women's advancement within Sufi Brotherhoods in Senegal. Bop again visits the story of Mame Diarra Bousso who is seen as akin to the Virgin Mary of Mouridism, takes on an almost supernatural quality. "She is portrayed as having been gifted with extraordinary qualities such as patience, perseverance, commitment, loyalty, a spirit of sacrifice, modesty, and the acceptance of seclusion...All female disciples are exhorted to follow them and identify with them."³⁰ Bop claims this image of the ideal Sufi woman creates a dominant narrative about what, who, and where a woman should be. "The behaviors and atti-

tudes that support the structures of the *tariqas* are idealized and presented as normative for all women, and alternative interpretations of women and of religious life and organization are severely limited.”³¹

Bop argues that progress in gender equality can only be fully realized in the secular sphere, where it can be confronted openly and directly, instead of through innovative manipulation within the brotherhoods, which Bop sees as “a sign of powerlessness.” Because of their inability to address the issues head on, she argues “Senegalese women...are faced with a very dire situation marked by poverty, strong gender, and class inequalities to which religion, especially when controlled by conservative forces, cannot provide adequate solutions.”³²

Advancement Through Islam

I would like to quickly familiarize readers with the concept of Islamic Feminism as it is important to understanding my analysis. There is not one definitive name used to describe the theories and concepts born of the intersections between feminism or womanism and Islam but it can be summed up roughly as the “Women-centered rereading of the Qur’an and other religious texts by scholar-activists.”³³ Badran writes about Islamic Feminism and states that “Islamic Feminism argues that the Qur’an affirms the principle of equality of all human beings, and that the practice of equality between women and men (and other categories of people) has been impeded or subverted by patriarchal ideals (ideology) and practice.”³⁴ It is her belief that Islamic feminism accords Muslims the chance to review certain practices that privilege men as well as the chance to reinterpret “interpretation[s] based on men’s experiences, male-centered questions, and the overall influence of the patriarchal societies in which they lived” reinforce women’s oppression.³⁵

Feminist Muslim theologians believe that when women have been denied social and political rights in Muslim societies “it is because of patriarchal interpretations of the sacred texts, not because of the texts themselves.”³⁶ According to Badran, “Islamic feminism insists on full equality of women and men across the public-private spectrum.”³⁷ Through the framework of rereading Islamic religious works like the Qur’an and the Hadiths without a male centered bias- Islamic feminists attempt to draw attention to verses that clearly affirm the mutuality of responsibilities of men and women within a partnership, not a dictatorship. Badran states that “Islamic feminist discourse...closes gaps and reveals common concerns and goals, starting with the basic affirmation of gender equality and social justice.”³⁸

Badran³⁹ and Shaikh⁴⁰ claim that through reexamination of the principles of Islam and its dominant interpretations that favor men above women, feminists will be able to construct a new understanding of Islam that promotes gender equality and on a grander scale, liberation for all humans. Shaikh states that Sufi Islam specifically allows for these reinterpretations, because Sufism at its base is focused on the God-human relationship and does not delineate a difference between the genders in ability to further this relationship. She argues that:

Certain Sufi discourses possibly present more faithful readings of the shari’a and the related assumptions of human nature, as reflected in the Qur’an, than the dominant *fiqh* discourses... An approach to the law that is nurtured in the soil of Islamic spirituality offers more than simple gender equality. It fosters a more holistic vision of community, one that facilitates the process of human spiritual refinement- a refinement to which gender equality is absolutely intrinsic.⁴¹

Advancement Through a Combination of Strategies

In contrast to the concept that progress can only be made either through strictly secular means, or through Islamic Feminism, Hill, Latha, and Sieveking write a meshing of tradition and religion with political and activist spheres that will best serve to promote women’s rights. Joseph Hill writes that urban women in Dakar have been able to gain religious authority through the appointing of *muqaddams* or spiritual guides. Originally only granted to men a strongly influential leader of the Tijiane order, Baaye Niass began to appoint women to these positions. The *muqaddmmas* (female version of *muqaddams*) create their livelihoods through charging for spiritual counseling and guidance, often supporting themselves and their entire families on their earnings. The women leaders claim an acknowledged connection between

the mothering and being a spiritual guide; “these leaders recognize that, like childbirth, the perilous process of Sufi initiation requires a guide naturally inclined to nurture and care for new initiates”.⁴²

Hill discusses the fact that highly educated and well respected women Islamic scholars and religious leaders are 1) mostly all married and 2) continue to show submission, acknowledging their husbands as heads of household, regardless of if her husband holds a much lower religious status. Hill sees these acts of submission (household tasks, curtsying, etc) as “a performance- a true and socially necessary performance, but one that contrasts with a deeper truth”.⁴³ Hill claims this is consistent with many powerful women’s self presentation. Hill underlines the point that through these ‘performances’ as he calls them, it is not that the women truly believe they are inferior, or see them as inherently repressive acts. They see them as a tool for navigating their complex world, maintaining their authority through both acts of leadership, as well as through acts of humility through the love of God. Hill states that “[s]uch a ‘performance’ is neither a disingenuous charade nor a naive reproduction of social roles but rather an act presented as an act intended to have multiple interpretations”.⁴⁴ He continues- “Some *muqaddamas* explicitly describe acts of submissiveness and interiority as ritual performances between the performance’s apparent (*zahir*) meaning and the hidden (*batin*) truth behind it.”

Hill states, “resisting the structures of patriarchal domination would be a meaningless question to many Senegalese women.” Instead, he argues that we should look at the ways in which women navigate epistemic authority. He writes that “Muqaddamas use established gender norms to reverse the hierarchies these norms often uphold, accentuating the equivalence between submission and ‘Islam’ (submission in Islam), interiority and hidden knowledge and motherhood and spiritual leadership”.⁴⁵ Hill asserts that the continual reverence of their husbands and the fulfillment of what are seen as a wife’s duties are a performance in which these women can garner more religious authority through exhibiting piety and humility before God.⁴⁶ “Wifely submission is not a mere act but can require significant compromises. However, in certain circumstances, acts of submission and self-effacement can bolster moral authority”.⁴⁷ He believes that it is through these acts of piety that *muqaddamas* are able to show their spiritual and moral authority. Hill writes that none of these women would see themselves as feminists or activists; “[d]espite speaking of gender equality and liberation, none hinted at overthrowing patriarchal structures or taking power for women. Rather, they depicted power and authority as things that God has given women as well as men. The question was how to cultivate, present, and exercise it”.⁴⁸

Gemmeke also writes about women who have chosen to pursue careers based on an assumed religious authority or purity that allows them to offer their services to others. Gemmeke offers the term “esoteric knowledge” to refer to parts of Senegal’s mysticism and forms of traditional knowledge such as dream interpretations, prayer sessions, numerology and astrology as well as divination sessions. As Hill states in his article, those who perform these tasks are commonly referred to as marabouts, and this work is seen as a job. As esoteric knowledge is generally a male dominated field, not much media or academic attention goes to the women performing these tasks. Gemmeke argues that the fact that these women both live in Dakar plays a large role in the possibility for them to work in this way, highlighting the role that modernization plays in creating new spaces for expression and practice. Gemmeke’s article follows the lives of two female marabouts who glean their livelihoods from the establishment of their expertise and authority as possessors of this esoteric knowledge outside of the brotherhoods.

Gemmeke asserts that they do this through claiming possession of and displaying qualities that are normally associated with men. Both women claim to having never menstruated, which is a huge barrier for most women to gain religious authority because they cannot participate in any religious ceremonies or acts while they are bleeding. Like Creevey, Gemmeke claims that women’s position was higher in traditional society with women being involved in religious ceremonies as well as holding positions of power within communities. She disputes the idea that Senegalese women are invisible victims within the Sufi Brotherhoods stating that “not all women remain invisible or powerless within the brotherhood structure”.⁴⁹ “Senegalese female experts in Islamic esoteric knowledge are neither exclusively products of a marginalization process aise by Islam or Islamic reformism nor representations of an Islam that been manipulated to their advantage. They are both, and more”.⁵⁰

Sieveking agrees that women in Senegal use religion creatively, and navigate different performances within Islam to survive. She refutes the image of African Muslim women as vulnerable victim with no autonomy. “Women are not only acting according to prescribed religious rules and norms, but also use religion instrumentally”.⁵¹ She goes on to claim that Islam actually gives a supportive network from which to work from. “The framework of a widespread and socially accepted religious practice allows women to develop agency, expand their room for negotiation and redefine the boundaries of traditional social structures without explicitly putting them into question”.⁵² Sieveking claims that women and then the men should get involved, because the issue concerned men and women equally. Sieveking underlined the importance of communicating with the religious authorities, to tell them that the campaign was not aimed at “making politics”, and that the women were in fact only asserting their rights. “Diagne described how a group of women activists from the RSJ (The Réseau Siggil Jigéen NGO) had talked with the highest representatives of the Tijan and Murid brotherhoods to make their intentions clear. The experience of meeting them and being listened to had been empowering: ‘To talk with the marabouts directly - that’s a good thing!’”.⁵³ Sieveking writes that “depending on the context and the women’s own social and economic background, they might use a progressive Islam interpretation such as the ‘religious argumentation for gender equity’ or prefer to rely on alliances with traditional Sufi authorities, who know that their female disciples can easily withdraw their social and economic support if their needs and expectations are ignored. Analysing women’s diverse negotiation strategies and the way they relate global and local discourses thus allows the question of the current labels of vulnerability and victimization, almost stereotypically applied to Muslim societies in public discourses on a global level”.⁵⁴

Latha disagrees with Bop that the secular route is the only route towards progress because religion plays such a central role in the lives of all Senegalese. She writes that is the combination of Islam, traditional values, as well as pieces of Western thought that will be most beneficial to women’s rights movements in Senegal in conjunction with cooperation between men and women. Latha discusses how the idea of women’s groups or associations has been used by feminist groups in Senegal to forward possibilities of creating gender equality. Instead of only organizing ceremonies and economic contributions, they used the platform given to women’s associations to educate and create awareness of issues, grappling specifically with women’s empowerment through multiple facets. Latha discusses the significance of the group Yewwu-Yewwi (raise consciousness for liberation) which was started in 1980 and sparked the fight for gender equality.⁵⁵ This group was composed of women educated in French schools in Senegal which garnered criticism of the group being elitist, unrealistic and out-of-touch. Yewwu-Yewwi did push for the Family Code which was adopted in 1989 but as Latha states the Code seemed to only help educated, urban women who were aware of the Code and what it meant.

The group Réseau Siggil Jigéen (RSL) is currently working towards women’s rights concentrating on the cooperation between men and women as well as the political and religious spheres to enhance women’s positionality. “Feminists are trying to promote their individual political, economic and social agendas outside the parameters of the religious establishment, the argument that this strategy will lead to real transformation does not seem to be a viable proposition in a country in which religious practice plays such a central role in everyday life”.⁵⁶ She states that for activism and resistance to be purposeful, it must be contextual and based on the lives of those it claims to serve. She asserts that given the socio-political-economic state of West Africa and specifically Senegal, approaches that incorporate the religious, political spheres with the narratives of everyday women is the approach that will prove the most progressive and see the most success. Latha claims that to leave the religious sphere out of the equation is to ignore the huge role religion plays Senegalese society.

Latha introduces the concept of African-Islamic Womanism as a context specific negotiation of rights and representation. “African-Islamic womanism focuses on challenging traditional class and caste hierarchies by reaching out to women in all sectors of society especially in rural areas, to facilitate positive changes. Their strategies include working closely with government agencies and the powerful male-dominated religious organisations”.⁵⁷ Her thesis is that “the most pragmatic and effective strategies for gender equity are being spearheaded by women’s associations such as the RSJ, as they are firmly rooted in their West-African socio-cultural and religious milieu and advocate for men and women to

work together to promote gender equity”.⁵⁸

Creevey states that on the surface Senegalese women could be seen as having something close to equality with men in ways I have described earlier. Creevey claims that we cannot understand the true “status of women” within Senegal without looking at other factors including education where 20% of women are literate, and girls comprise only 41% percent of the total school attendance. She also looks the economy- where women have entered into wage work, but still have difficulty securing high positions, and politics where women hold a high percent of national positions but in no way vote as a unit or provide a space for the discussion of women’s equality. Creevey states that there are a multiplicity of different factors that contribute to women’s role within Senegal including traditional systems, colonization, and Westernization.

The subject of women’s roles and positionalities within the Sufi Brotherhoods, as is the case of the positionality of women everywhere, is many-layered and complex. The authors of the literature included in this review have varied opinions about what is the best approach to ensure women’s continued progression towards increased autonomy and agency within Senegalese society. Bop believes that it is through secular means only that women can progress. Badran and Shaikh argue that Islamic Feminism creates an avenue to contest patriarchal readings of the Qu’ran and other sacred Islamic texts, as well as the idea that Islam is inherently oppressive of women. Hill, Sieveking, Gemmeke, Creevey, and Latha all argue that it is through the creative combining of the religious and political, as well as the public and private spheres that women are able to combat sexist policies and practices within Senegalese society. I found that within the literature, it was the presence of women’s narratives and voices in the text that were the most compelling because of the richness and authenticity experience brings. When we are able to read about women negotiating and navigating through systems of power and privilege in their own unique ways, we are able to see a truthful representation of their struggles and their achievements. It is important that these women are seen clearly and contextually, not as victims of colonization, an oppressive religion, “backward’s traditions, or an immobile society, but as creative authors of their own narratives. Regardless of the method of resistance being employed, be it within, without, or woven between the existing power structures, it is critical that the voices at the center of any movement are the voices of those who are directly involved. Any research void of these voices will be lacking value, as what scholars believe of the positionality of women in any society is only relevant if the women themselves are somehow involved in the process. As Hill states “I have not attempted to evaluate whether Taalibe Baay *muqaddamas* are effectively resisting the structures of patriarchal domination, a question that most of these women would surely find meaningless”.⁵⁹ As is clear by the literature presented in this review, transnational feminist movements and spaces of resistance are not always radical self-realized spaces. Negotiation and navigation of power structures comes in many forms and fashions, each as unique as the individuals and/or communities that birth them. It is important to recognize this truth, because without this understanding, many actors, spaces and methods of creative resistance might potentially be overlooked or ignored because they do not fit into standard perceptions of what of activism, feminism, or liberation is or looks like.

About the Author

Georgia graduated from HSU with a BA in Cultural Anthropology and minors in French and Francophone Studies and CRGS; Gender Studies in May 2016. She studied abroad in Dakar, Senegal during the 14-15 academic year, and is returning in November 2016 to begin a job as a Team Leader with Global Citizen Year. She is interested in the intersections of spirituality, art, music, and social justice. She would like to thank Dr. Kim Berry and Dr. Joseph Dieme for their help with this article. Georgia can be contacted at gnc47@humboldt.edu.

Notes

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19. Ibid., 56.
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26. Ibid., 1113.

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32. Ibid., 1002.
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34. Ibid., 247.
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36. Ibid.
37. Ibid., 250.
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Sedimentation Risk Assessment Using Satellite and Geospatial Data in Lagoa Feia, Brazil

U. B. Rohrer and B. D. Madurapperuma

Abstract

Lagoa Feia is a lake located in Rio de Janeiro, Brazil, which historically experienced sedimentation impacts due to channel ditching which was enacted to manage water resources for agricultural practices and to avoid flooding. This study models the significance of erosion in the lake basin integrated with land-use, soil types, and climatic data using geographic information system (GIS) techniques. The erosion model was built using the above input variables by applying weighted overlay methods, and the vulnerable areas were mapped. Landsat 8 images were utilized for remote sensing analysis, such as image enhancement indices to detect depth, sedimentation and land-use changes over time. The results of the study are useful to implement Best Management Practices to overcome the issue in the lake.

1. Introduction

1.1 Lagoa Feia

Lagoa Feia is the second largest lake in Brazil and is localized in the State of Rio de Janeiro (Fig. 1). The lake has a great economic importance, as it is the main water supply for the urban region of Quissamã and to the surroundings rural areas. The water is used to irrigate sugar cane, pineapple and coconut plantations. Commercial fishing activity is present in the lake: fish, such as tilapia, acará, bagre and morobá are a source of profit for the population. A channel, namely Canal das Flechas was built connecting Lagoa Feia to the sea in 1948. The purpose of the channel was to drain the water from Lagoa Feia, to avoid floods the city of Campos dos Goytacazes.¹ The negative impact of the canal was sediment loading to Lagoa Feia due to poor management. Furthermore, the construction of Canal das Flechas and other anthropogenic interventions caused a loss of 2/3 of its area in its water surface of Lagoa Feia.²

1.2 Erosion and Sedimentation

Soil erosion is mainly caused by land-use, rainfall, slope and soil type.³ After the soil is eroded, it can enter into the stream system by precipitation.⁴ Land-use practices, such as agriculture and urban development, can threaten aquatic species by degrading the habitat via runoff and sediment loads.⁵ Landscapes with inclined slopes maximize the runoff velocity, making the water carry sediments in higher quantity and size, while terrains with lower slope will have less sediment transport.⁶ Each soil type has its own erodibility and water absorbance indices, clay based soils have lower erodibility and water absorbance rates since its particles are very small and does not allows water to go through easily. Precipitation is primarily responsible for the transportation of the sediments load into stream systems.⁷



Figure 1: Study area that comprehends the basin of Lagoa Feia - Rio de Janeiro, Brazil; Locator Map

The pollution of bodies of water by fine particulate terrestrial materials, such as silt or clay, is characterized as sedimentation. Sediment deposit in the stream's bed suffocates fish eggs, eliminates breeding areas, and can become embedded in the fish's gills causing respiratory problems. It blocks the sunlight, reducing the growth of organisms. The decreasing depth and flow of the stream from sediment accumulation affects the stream's navigation, and during heavy rains maximizes the chances of flood.⁸

1.3 Geographic Information Systems

Geographic Information Systems (GIS) is a computer system designed to store, manipulate, analyze, and display geographically referenced information.⁹

1.3.1 Weighted Overlay

Weighted overlay is a tool from the Spatial Analyst extension in ArcMap. It is one of the most widely used approaches to solving multi-criteria problems. Different criteria layers can be combined into one analysis while weighting the important criteria more than the other criteria.¹⁰

Nick¹¹ used Weighted Overlay to combine the main four factors of erosion and build an erosion model. With this model, it is possible to predict sites that are more susceptible to suffer erosion according to the factors.

1.4 Remote Sensing

Remote Sensing is the acquisition of information about an object without making physical contact with it.¹² Commonly, satellites and aerial pictures are the sources of data for Remote Sensing. Environment for Visualizing Images (ENVI) is a conventional Remote Sensing software that groups several professional tools to process and analyze geospatial images.¹³

1.4.1 Change Detection Workflow

The change detection workflow in ENVI compares images from different time steps and outputs the differences between them. The differences can be related to specified Indices, such as NDVI and NDWI.¹⁴

1.4.1.1 Normalized Difference Vegetation Index (NDVI)

This index is a math equation using the Red part of the visible spectrum and Near Infrared (NIR) bands:

$$NDVI = \frac{NIR - RED}{NIR + RED}$$

By applying this index to an image makes it possible to highlight photosynthetically active vegetation. Features that present a NDVI near to +1 have high photosynthetic activity, in other words the vegetation is healthier and denser. Features that present a NDVI near to 0 have low photosynthetic activity, a particularity found in unhealthy vegetation or features other than vegetation.

1.4.1.2 Normalized Difference Water Index (NDWI)

This index is a math equation using the Green part of the visible spectrum and Near Infrared bands:

$$NDWI = \frac{GREEN - NIR}{GREEN + NIR}$$

Applying this index to an image is possible to highlight all the open water features. Water features have a positive NDWI while vegetation and soil have zero or negative values.¹⁵ Is possible to conclude that water features with higher NDWI does not have interference of vegetation and soil, otherwise water features with lower NDWI have interference of vegetation and soil.¹⁶

1.4.2 Spear Relative Water Depth

The relative water depth in ENVI produces a relative depth analysis in water features using an albedo-independent Bathymetry algorithm.¹⁷ It is important to have an image that is not corrected when performing this kind of analysis, since it can change the data and produce unsatisfactory products. This tool only measures the relative depth, not the absolute depth, so it comprehends a range from zero to one, where zero is the minimum depth and one is the maximum depth.

The objective of this study is to predict sites that are more likely cause sediment erosion and to assess the spatial and temporal changes in the lake and in its basin. The results of the land-use change model and the sedimentation model are useful for land managers to implement best management practices to overcome the impact of sedimentation in vulnerable areas.

2. Methods

The project is separated into two parts; the first part is the erosion model that was built using the geospatial software ArcMap, and the second part comprehends the Remote Sensing analysis using ENVI software and the data processed using ArcMap.

2.1 Erosion Modeling

For the geospatial modeling analysis proposed by this project, we used three shapefiles (Table 1). Each shapefile presents one factor of erosion. The data was reclassified into intervals; each interval has an index that shows its susceptibility to erosion.

Shapefile	Date	Author
Annual precipitation means	1977 to 2006	CPRM
Soils map of Brazil	2001	IBGE - EMBRAPA
Land-cover map	2002	SIVAM

Table 1: Information about the spatial data used

The annual precipitation intervals and its erosion indices are listed in Table 2.

Annual Precipitation mean (mm)	Erosion Index
800 to 1040	1
1040 to 1280	2
1280 to 1520	3
1520 to 1760	4
1760 to 2000	5

Table 2: Annual precipitation mean intervals and indices

The land-use types and its erosion indices are listed in Table 3.

Land-use type	Erosion Index
Forest	1
Sandbanks	3
Agriculture / Anthropogenic	5

Table 3: Land-use classes and erosion indices

The types of soils and its erosion indices are listed in Table 4.

Soil type	Erosion Index
Water body	1
Inceptisols	3
Molisols	4
Oxisols	4
Spodosols	5
Entisols	5
Gelisols	5

Table 4: Soil types and erosion indices

The Erosion Index Model was built with the tool “Weighted Overlay,” using the following equation:

$$Erosion\ Index\ Model = Precipitation * \frac{1}{3} + Soil\ type * \frac{1}{3} + Land\ use * \frac{1}{3}$$

Each erosion factor contributes equally to the model.

2.2 REMOTE SENSING ANALYSES

For the Remote Sensing analysis proposed by this project, we acquired two Landsat 8 images of the region of Lagoa Feia using Earth Explorer (Table 5)

Identity ID	Date acquired	Cloud Cover	Spatial resolution	Radiometric resolution
LC82160752013287LGN00	2013-10-14	1.2	30 meters	16 bits
LC82160752016040LGN00	2016-02-09	0.13	30 meters	16 bits

Table 5: Imagery used in the analyses

The Landsat data was processed using ENVI software according to the flowchart below (Fig. 2). To perform the map creation was used the software ArcMap.

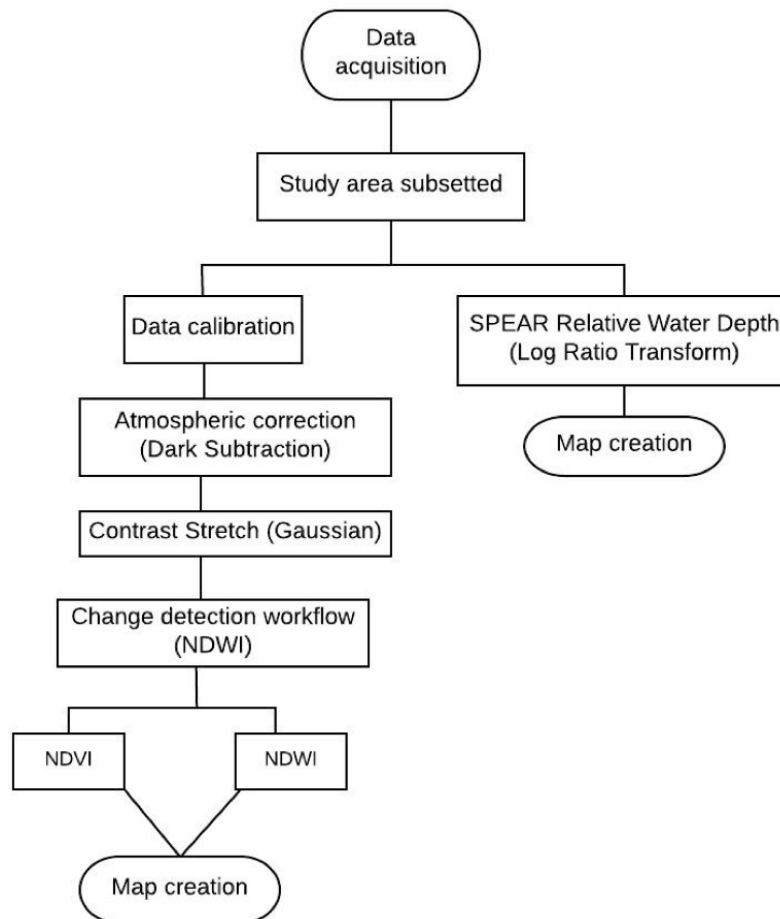


Figure 2: Flowchart showing the main steps for change detection Lagoa Feia basin

2.2.1 Change Detection Workflows

The change detection of the Lagoa Feia basin was analyzed using three different indices such as, NDVI, NDWI and SPEAR Relative Water Depth to map the vulnerable areas.

2.2.1.1 Normalized Difference Vegetation Index (NDVI)

The objective of this project was to analyze the differences in the NDVI using the lake images from 2013 to 2016.

2.2.1.2 Normalized Difference Water Index (NDWI)

The objective of this project was to analyze the differences in the NDWI using the lake images from 2013 to 2016.

2.2.1.3 Spear Relative Water Depth

For this project we performed two in-depth analyses using the Log Ratio Transform method; one from 2013 and another one from 2016. The following classes were adopted to classify each category of depth (Table 6):

Depth class	Relative depth index
Very shallow	0.01
Shallow	0.1
Moderate	0.3
Deep	0.6

Table 6: Classes of Relative Depth

3. RESULTS

3.1 Erosion Index Model

The Erosion Index Model indicates that areas with medium and high susceptibility to erosion primarily surround the lake. Sites with Very high susceptibility to erosion were only present in the south of the study area (Fig. 3).

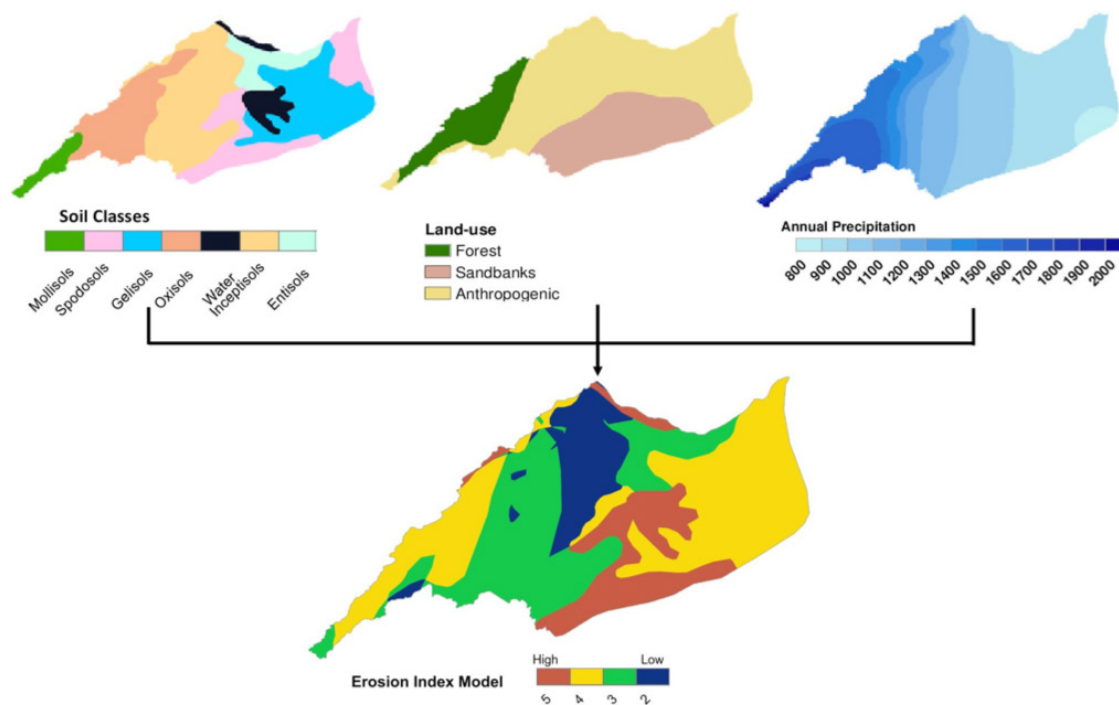


Figure 3: Erosion Index Model created using soil, land-use and the precipitation data in the Lagoa Feia basin

3.2 Remote Sensing Analysis

Relative depth variation was performed using remote sensing and geospatial analysis methods. The results are presented in Fig. 4.

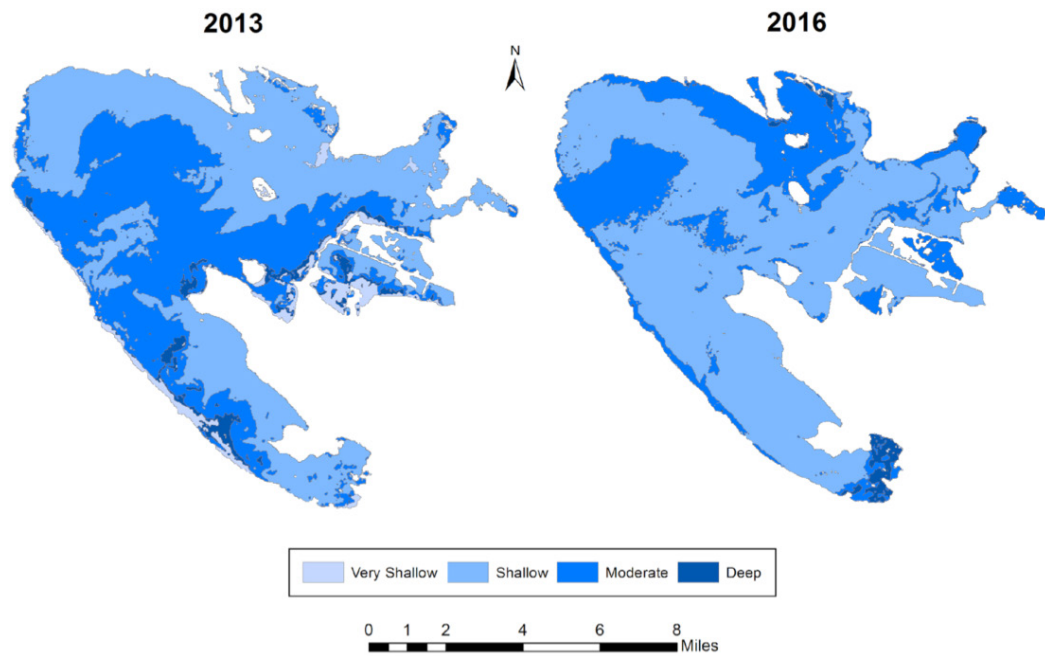


Figure 4: Relative depth variation of Lagoa Feia between 2013 and 2016

By analyzing the map, one can observe that many areas that had a Moderate depth in 2013 now have a Shallow depth in 2016. Measurements of the area were calculated for each of the depth classifications (Table 7).

Date	Very shallow (km²)	Shallow (km²)	Moderate (km²)	Deep (km²)
2013	9.558	89.8758	71.0721	5.3001
2016	1.3509	119.5155	52.7634	3.2175
Difference (%)	-4.672	16.459	-10.590	-1.195

Table 7: Superficial area of each classification of depth

The area of Shallow depth increased almost 16.5% between these 3 years. Note that Very Shallow, Moderate, and Deep depths decreased over this time frame.



Figure 5: NDWI difference of Lagoa Feia between 2013 and 2016

It is possible to observe that areas near the edges of the lake experienced a decrease of the NDWI (Table 8).

NDWI	Area (km ²)	Percent (%)
Large increase	0	0
Large decrease	11.835	2.962819

Table 8: Superficial area of NDWI changes

Almost 3% of the lake area experienced a decrease of the NDWI, while no other area of the lake experienced an increase (Table 8 & Fig. 6).

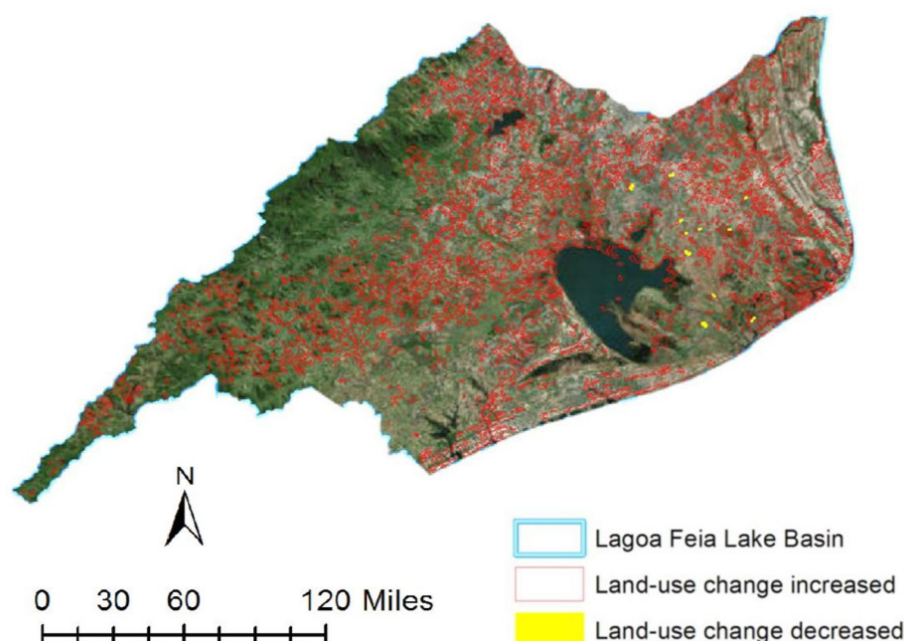


Figure 6: Map of NDVI difference in the basin of Lagoa Feia between 2013 and 2016

Many sites in the basin experienced an increase of land-use change between 2013 to 2016. In other words, the NDVI of these sites has decreased. Small parcels show a decreased land-use because the NDVI was greater at 2016.

4. Discussion and Conclusion

The Erosion Index Model indicated that many areas that surround the lake are vulnerable to erosion. The soil erosion allied to sediment transport by precipitation or wind can reach to the lake, ultimately polluting the water.

By analyzing the Relative Depth Map it is possible to identify areas that had once been deep or moderated are now shallow. Over these three years, the shallow area of the lake increased 16.5%. It is most likely due to the sediment accumulation in the bottom of the lake.

By analyzing the NDWI difference map, it is possible to identify that experienced a significant decrease in the Normalized Difference Water Index. If the NDWI is lower, one can assume that the water has suffered interference of either vegetation or soil. Over these three years, the NDWI decreased at an area of 11.835 km², which is almost 3% of the total area of the lake.

The NDVI difference map shows that the land-use has increased in the last three years. Due to the fact that parcels are being deforested in order to make space for agriculture and urban areas.

The basin is going through land use changes. Since there is a medium to high risk of erosion, the land use changes can be strictly related to the sedimentation issues that are occurring at Lagoa Feia basin. The areas with large sedimentation are evidenced by the NDWI difference and the increase of shallow depth in the lake.

To avoid further sedimentation to the lake, it is highly recommended that the land managers should implement Best Management Practices such as, tree planting and establish riparian buffers for filtering the sediments to avoid more soil erosion. Artificial sediment barriers can be built to prevent more sediment load into the lake. Otherwise, natural sediment barriers as dense riparian vegetation can mitigate the water pollution.

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Dr. Buddhika Madurapperuma is a Lecturer at the Departments of Environmental Science and Management, and Forestry and Wildland Resources at Humboldt State University (HSU). He conducts multidisciplinary research on land-use/cover change, forest silviculture, and predicting and mapping invasive species distribution using Geographic Information Systems (GIS) and remote sensing techniques. He is passionate about teaching diverse courses at HSU, including Introduction to GIS, Intro/Intermediate Remote Sensing and Mobile Mapping. Dr. Madurapperuma has mentored several students from the Brazil Scientific Mobility Program (BSMP) and his students have produced numerous research outputs through the internship program. For example, he and U.B. Rohrer, a BSMP scholar, produced this article through the 2016 BSMP summer internship program. The authors would like to acknowledge Sara Hanna for the Remote Sensing technical support. Buddhika Madurapperuma can be contacted at bdm280@humboldt.edu.

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Academic Advising Support for Students on Academic Probation

Kaitlyn N. Stormes

and Gregg J. Gold

Abstract

This study compares the results of four different models of academic advising support for students whose first term GPA fell below a 2.0 resulting in academic probation status. Previous research suggested that one-on-one interactions during advising are beneficial for students, especially those on academic probation. Using archival data, the current study compared the effects of four models of advising: one-on-one appointment and monthly follow-up meetings with Learning Center staff; an online orientation, two-hour workshop, and monthly follow-up meetings between the student and Learning Center staff; an online tutorial only; or an online tutorial combined with a single meeting with a professional advisor. Using analysis of variance and Pearson's chi-square tests, the four advising models were compared on the following measures: end of term GPA and overall end of year GPA for all students in the study; end of term GPA and end of year GPA among academic probation students; academic standing at the end of the year; and retention of probationary students. Results suggest no differences in these measures of success for students on academic probation based on the academic advising support model to which they were exposed.

Introduction

Academic advisors play an important role in college student success by providing advice to students on a variety of matters. Academic advising is defined as an intentional process that facilitates students' academic, social, professional, and personal development.¹ Academic advising is associated with measures of academic success for students, particularly in the first two years of college, and for students who are struggling academically.² Overall, research suggests that academic advising should be done by a professional advisor, especially for students on academic probation.

There is a lot about advising that is unknown and under debate.³ Among the main researchers in the field, there is no consensus about the best practices for advising students on academic probation.⁴ Questions include who should advise students, what style of advising to use, when this advising should happen, and for how long.⁵

Academic advising in higher education is difficult to study, but the few studies that exist agree that advising is an important component of student success.⁶ Because advising has been identified as important to student success, further research concerning different advising protocols is indicated.

Humboldt State University (HSU), with 8,790 students, has undergone a lot of changes in the advising support offered to students on academic probation. Since 2009, HSU has moved from individual to group advising, to an online-only advising model. These services were primarily provided by the campus Learning Center whose primary function is academic support such as tutoring, writing, and study skills. The university stopped requiring one-on-one meetings between students on academic probation and professional staff in Spring 2013. In Fall 2014, a new model of advising was initiated; where selected first-time undergraduates on academic probation met one-on-one with their professional advisor within the Academic and Career Advising Center in addition completing an online tutorial. Similar students who were not in this program only completed an online tutorial.

The California State University (CSU) Chancellor's office provides retention rates for all CSUs. The average 1-year retention rate is 82%. HSU has a 1-year retention rate of 74%. For students on academic probation, HSU's 1-year retention rate is 59.4%.⁷ Thus HSU is an ideal environment to evaluate the efficacy of various advising protocols. Note that at HSU, a student is placed on academic probation if their attempted units and resulting cumulative grade point average (GPA) falls below 2.0 on a 4.0 scale.⁸

The present study evaluated the effectiveness of various academic advising models provided to students on and off academic probation based on overall academic standing among probation students and retention of probation students. A number of questions were addressed: What difference (if any) did shifts in advising make for students on academic probation; Did having a professional advisor, as opposed to a faculty advisor or student services professional make a difference; Did one-on-one meetings make a difference?

Academic Advising at HSU

This study examined four advising models that HSU has provided to students on academic probation since 2009.

Advising Model 1

Starting Fall 2009 and ending Spring 2011, students on academic probation met one-on-one with a Learning Center staff member to discuss the rules and regulations of being on academic probation and circumstances that contributed to their academic probation status.⁹ During these meetings, an Academic Success Plan (ASP) was also created. The ASP needed to be signed by the student's faculty advisor and brought back to the Learning Center (LC) in order for the student's "Academic Probation Hold" to be removed so they could register for classes. In addition, students also met with staff in the LC for monthly follow-up appointments.¹⁰

Advising Model 2

Fall 2011 to Spring 2012, workshops and an online orientation program replaced one-on-one advising support from LC staff. The ASP was created during a two-hour academic probation on-campus workshop. Students on academic probation were required to bring their ASP to their faculty advisor for a review and signature before getting their hold released. Monthly follow-up meetings with a Learning Center staff member were also required.¹¹

Advising Model 3

Beginning in Spring 2013, students on academic probation (AP) were only required to complete an online tutorial created by HSU.¹² The online-only tutorial, alerts students that they need to take action in order to avoid disqualification. Completion of the tutorial produces an ASP, which is then automatically emailed to the student and their assigned academic advisor but no in-person meetings or signatures were required. The Learning Center estimated that completing the tutorial required about 34 minutes of the students' time, and once students completed the tutorial, holds were removed between 24 to 48 hours later and students were then able to register for courses.

Students were no longer required or held accountable to meet monthly with a LC staff member, but encouraged to follow-up with them and attend workshops as the student felt necessary.

Advising Model 4

In addition to the LC online tutorial, students on academic probation had an additional hold on their student account which was removed only after meeting with their professional academic advisor. At this meeting, the student filled out an intake form, which offered an opportunity for the student to reflect on their life and the circumstances that led to the resulting academic probation standing. This meeting

provided the advisor an opportunity to take a holistic approach to each student's situation. Together, the professional advisor and the student strategize actions and agree on the specific steps the student will take to return to good academic standing.

Hypotheses

Hypothesis 1

An increase in end of term GPA is expected for students on academic probation who met with a professional advisor (Model 4), compared to the GPA of student cohorts who received academic advising without a professional advisor (Models 1, 2, and 3).

Rationale

Research suggests that with an active professional advisor assisting students on academic probation, their GPA and overall academic success will improve.¹³ Students who participated in an academic probation intervention and met with their advisor three or more times improved their GPA compared to students who did not.¹⁴ With the use of these types of probation interventions, previous research found increased GPA. Therefore, it is expected that this study will find a similar outcome.¹⁵

Hypothesis 2

More students on academic probation will return to good standing with Advising Model 4 compared to students who did not receive professional academic advising.

Rationale

Preuss and Switalski found that students moved into good academic standing when participating in academic probation interventions especially when they met with an advisor at least once, compared to students who did not participate or meet with their advisor.¹⁵

Hypothesis 3

One-year retention rates will be higher for students who received professional academic probation advising compared to students who did not.

Rationale

According to Tinto as cited by Kot, "Effective retention programs recognize academic advising as being at the core of institutional success to educate and retain students (p. 529)."¹⁶ Research by Kot suggests retention rates increase when students work one-on-one with professional advisors who are committed to providing advising to students about their academic and career goals. Professional advisors take a holistic approach to advising students and talk not only about academics, but also other aspects of students' lives, and help them feel connected to campus staff.¹⁷ Connectedness is particularly important for HSU, as currently, 85% of current students are from areas outside of Humboldt County.¹⁸

Methods

Participants

This study analyzed a sample of 3,019 Humboldt State University first-time undergraduates who matriculated from 2009 to 2014. As Advising Model 4 only applied to students enrolled in Biological Sciences, Environmental Science and Management, Psychology, Undeclared, Sociology, and Wildlife, only students who were enrolled in those departments were compared in this study.

Four cohorts of students in the same departments from previous years (from 2009 through 2014) were used as comparison groups. Each group received different academic advising support. Advising Model

1 ($n = 956$) was exposed to one-on-one appointments and monthly follow-up meetings. Advising Model 2 ($n = 484$) was exposed to an online orientation, 2-hour workshop, and monthly follow-up meetings. Advising Model 3 ($n = 1029$) was only exposed to an online-only tutorial. Finally, Advising Model 4 ($n = 550$) was exposed to an online-only tutorial and one-on-one meeting with a professional advisor.

Secondary data analysis provided student demographics for all students in this study (Table 1)

Table 1
Participant Demographics

	All Students Count	All Students %	AP Students Count	AP Students %
Participation	3,019	100	881	70.0
First Generation	1,136	38	468	44.4
Remediation	1,220	40	415	47.0
URM	1,136	38	421	47.8
Lives On Campus	2,562	85	761	86.4
Average (14) units	540	18	161	18.3

Note. Count is actual number of students and % represents this percentage. Remediation refers to Math, English, or both.

Study Procedure

Secondary data analysis was used to examine existing data records and demographics of the participants in this study. There was no random assignment when the data was collected, thus the study is a quasi-experiment. Humboldt State University actively collects information and data about their students and this information is then stored in the Strategic Data Repository (SDR). The SDR is an Oracle database that contains all of HSU’s student data. Institutional Review Board approval was obtained before the study began.

Data Analysis

In order to clean and code the dataset, IBM SPSS Statistics for Windows, Version 23.0 was used. Data was missing at random. Of the missing data, 9.5% of all participants did not return after their first semester, while 14.87% of students on academic probation did not return after their first semester so end of Spring term GPA was not present for these students. Parametric data was checked for homogeneity of variance, and assumptions of normality were met. For Hypotheses 1 and 2, the dependent variable is GPA at the end of Spring term, a continuous variable, so analysis of variance (ANOVA) was used. For Hypothesis 3, the dependent variable was academic standing (good or not), a categorical variable, so Pearson’s chi-square test of independence was used. The chi-square test of independence was also used to test Hypothesis 4, as the dependent variable, retention (retained or not), was also categorical.

Before completing the study, power analyses were run to determine minimum sample sizes necessary to avoid a Type II error. Sufficient power of 0.80 was present in all cases, and minimum sample sizes were obtained.

Results

For the first hypothesis, there was not a significant effect of advising treatment on end of term GPA for students on academic probation. There was no difference between Advising Model 1 ($M = 1.56$, $SD = 1.15$), Advising Model 2 ($M = 1.63$, $SD = 1.14$), Advising model 3 ($M = 1.60$, $SD = 1.18$), or Advising Model 4 ($M = 1.64$, $SD = 1.18$), $F(3, 746) = 0.275$, $p = .843$, $\eta^2 = .001$. No differences were present in terms of end of term GPA for students on academic probation depending on advising model.

Similar results were found in regards to the end of year GPA. There was not a significant effect on end of year GPA based on advising model for students on academic probation, where Advising Model 1 ($M = 1.85$, $SD = 1.01$), Advising Model 2 ($M = 1.83$, $SD = 1.19$), Advising Model 3 ($M = 1.90$, $SD = 1.04$), and Advising Model 4 ($M = 1.92$, $SD = 1.04$) did not differ, $F(3, 877) = 0.226$, $p = .878$, $\eta^2 = .001$. There is no difference in terms of end of year GPA for students on academic probation regardless of advising model they received.

For Hypothesis 2, academic standing was studied for students on academic probation. The type of advising model of support offered did not have a significant effect on whether students on academic probation return to good standing or not, $\chi^2(6) = 10.89$, $p = .092$, $\phi = .111$. There is no difference in terms of academic standing based on the advising model that students on academic probation received.

For Hypothesis 3, retention was studied and the type of advising model did not have a significant effect on whether or not students on academic probation were retained, $\chi^2(3) = 1.639$, $p = .651$, $\phi = .043$. There was no difference in advising models when looking at retention.

Overall, results suggest that there was no influence of the type of academic advising model on the academic outcomes of the students studied.

Discussion

Significant differences in student success related to academic advising models were expected but it is clear from the results that this was not the case. Regardless of the advising model studied, the type of academic advising had no significant influence on end of term GPA, end of year GPA, academic standing, or retention. It is important to acknowledge that this was the first year that Advising Model 4 program was implemented. Though significant differences were not found for one-on-one academic advising, if changes are made in the future, it is unknown if professional advising will make a difference.

Limitations, Impact, and Suggestions for Future Studies

Assessing programs at a university brings many challenges and limitations that may have contributed as to why this study did not find differences among advising models. The first limitation is the lack of randomized control available in higher education.

The data obtained for this study from the university database was messy. First, the provided data needed to be defined by the Humboldt State University Data Dictionary, and matched to the CSU Enrollment Reporting System (ERS). After fields were determined, further work needed to be done to ensure variables were valid. For example, the provided GPA variable was not the initial GPA students earned when they were first on academic probation; it was upwardly adjusted for the classes they retook after the original probation notice. When studying students and their GPAs over time, the valid variable would be the GPA students earned that put them on academic probation, not the adjusted GPA. The university was made aware of this issue, and was able to create a valid measure of original GPA for students. Note that for this study the valid and correct GPA was used.

Further issues with the data came when defining treatment groups and who would be included in the sample for this study. For example, even with a Fall census to Spring census definition for the Advising Model 4 cohort, it is unknown whether students remained in the program the entire academic year. One reason is because, at the time the study was done, the data was not available to follow students in and out of Advising Model 4 departments to get an accurate sample of students who were actually served. When

a student uses campus services, their interactions are documented in the Oracle database PeopleSoft through the use of student service codes. Even if a student met with an advisor, there were no codes indicating what the meeting was about. Thus, there was not an accurate way to measure how many meetings a student attended, how long meetings were, and amount of meetings for students in this study. Discovering the issue of coding deficiencies through this study provided an opportunity to bring awareness of this issue to the director of advising, and resulted in the creation of new and specific coding protocols for a variety of advising services to eliminate this problem going forward.

The previous example of advising service codes led to further investigation of the processes and other documentation for the meetings Advising Model 4 students had with their professional advisor. It is possible that with more structure to academic advising meetings, less advising variability, less advisor turnover, a better definition of the Advising Model 4 cohort, more than one required meeting, and better documentation for students support services, different outcomes may be found. Although this program was partially implemented, this study provided stakeholders an opportunity to communicate efforts and design a stable structure for advising prior to going campus wide.

Lastly, this research did not find differences in advising models a student received on measures of student success, but there were many potential influences not accounted for. Some issues not controlled for include: financial, home, and food insecurity, class times or availability of classes, students in the wrong majors, and inconsistency with students receiving additional services such as tutoring, supplemental instruction, and involvement with high-impact practices such as research, clubs, and other activities.¹⁹

Recommendations

Future research may consider other variables that the literature supports as affecting measures of academic success. For example, amount of hours students work, extracurricular activities, first-generation, high school GPA, SAT scores, financial aid, if students live on or off campus, involvement in clubs, research on campus or within the community, and distance from primary caregiver could be areas for future exploration.

Another option may be to look at correlations between number of meetings with professional advisor and measures of student success. For example, as noted earlier, the research suggests that the more times a student meets with their advisor, the higher their GPA; thus, indicating a positive relationship between meetings and GPA. It would also be beneficial to run analyses on the responses to the student success forms that students fill out at the initial academic probation meetings. For example, the number of study-hours students report spending compared to the recommended 2:1 study rule HSU has (two hours of studying for every one hour a student is in class).

Finally, recommendations to provide additional support opportunities for students on academic probation include: students on academic probation to take a course similar to Supplemental Instruction (SI) about how to manage time and be a successful student, require monthly meetings between professional advisors and students, create study groups within the caseload of advisees in similar courses, mandatory meetings between the student and each of their professors, and have the students log their hours spent studying. By conducting this study, the university was made aware of several important areas that needed improvement. It is gratifying to note that these changes are currently being implemented.

About the Author

After graduating with a Master of Arts degree in Academic Research Psychology from Humboldt State University, Kaitlyn is pursuing her passion of studying student success initiatives at California State University, Long Beach as a Research Analyst in the Institutional Research and Assessment Office. Kaitlyn would like to thank Su Karl and Cai Stuart-Maver from the Learning Center; Clint Rebik from the Registrars Office; Dr. Kathy Thronhill, Kelda Quintana, and Dana Deason from the Academic and Career Advising Center; Dr. John Lee, the Dean of College of Professional Studies; Dr. Peg Blake the Vice President

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Exoplanet Research:

Differential Photometry for Kepler 6b

Garrett T. Benson and Charlotte Olsen

Abstract

Since their discovery, exoplanets have become a rich source of potential information on solar system structure and evolution, solar system dynamics, and the prevalence of life in the universe. As part of an exploratory study of exoplanet atmospheres at Humboldt State University, we studied the light curve of the exoplanet Kepler 6b using a student written program to determine the radius and orbital period of this planet. We found the results of our program corroborated the results of previous studies of this same planet. These results allow us to proceed with confidence towards further analysis of this object that we can determine its thermal profile and put constraints on its atmosphere. The end result will be the refinement of a method for analyzing the thermal and atmospheric information of exoplanets in order to better determine the prevalence of Earth-like planets in the universe which are capable of hosting life.

1. Introduction

Extra solar planets, or exoplanets, are planets that lie outside of our solar system. An extrasolar planet can be discovered by the so-called *transit method*, in which the planet passing in front of it's host star will cause the light, we can detect from the star, to dim.¹ With the Kepler telescope or the use of any other CCD camera we can detect a change or decrease in the overall intensity of light from the host star. Measuring this light incident on the CCD is called *photometry*, and measuring the relative amount of light coming from different objects, such as a star and its planets is called *differential photometry*. The Kepler Mission launched in March 2009, spent a little over 4 years monitoring 150,000 stars in the Cygnus-Lyra region with continuous 30 min to 1 min sampling. The primary objective was to detect exoplanet transits with an emphasis for rocky (terrestrial) planets with radius $R < 2.5 R_{Earth}$ hopefully within the habitable (Goldilocks) zones of Sun-like Stars. The habitable zone is the region around a host star in which a planet can have a temperature and atmosphere that could possess liquid water. This is essential for a planet to support life. As of May 11th, 2016, over 4000 exoplanet candidates have been discovered by the Kepler Spacecraft. We can analyze data from the Kepler Spacecraft to detect and gather information from these exoplanets.

1.1 Primary and Secondary Eclipses

The term light curve describes flux over time, and variations in the light curve signal the presence of a planet.² A large periodic dip in the light curve is evidence of a planet transiting in front of its parent star, as the light blocked by the planet will cause a reduction in flux. This is known as the primary eclipse.³ A much smaller periodic dip is seen when the planet moves behind its star. This, known as the secondary eclipse, is a result of only having the flux of the star where elsewhere in the light curve is the combined light of both star and planet.⁴

1.2 Kepler 6b

Each object discovered by Kepler, referred to as a Kepler Object of Interest (KOI) is given a corresponding ID number so they can be easily accessed through the data archive. After reviewing an article from 2011 that focuses on exoplanets⁵, we chose an exoplanet with detailed analysis to use as a template for our research. By selecting a known exoplanet we could also use its KOI ID number to search the Mikulski Archive for Space Telescopes (MAST) database and download the files containing it's light curves. One of the objectives of our research was to create a python program that would help us analyze data and study exoplanets and their characteristics. We can establish a stronger understanding of how to interpret the data by reproducing results of an exoplanet that have been obtained previous to our research. For this study we chose to analyze Kepler 6b, a Jupiter sized planet orbiting a Sun-like

star, Kepler 6. Kepler 6 is both more massive, $M_* = 1.21M_\odot$, and larger than the Sun, $R_* = 1.39R_\odot$.⁶ The orbital period of this planet is 3.2347 Julian Days.⁷ Planets such as these are referred to as Hot Jupiters. A “Hot Jupiter” is a planet with a mass of the order, or larger than, the planet Jupiter, but it is closer to its host star than Earth is to our Sun.⁸ Due to their short orbital radius, Hot Jupiters are the easiest to detect through the methodology of exoplanet transit.

2. Data Analysis

2.1 Data Pipelines

The data is downloaded from the spacecraft through the Deep Space Network. The Mission Operations Center at the Laboratory for Atmospheric and Space Physics (LASP) receives the data that is organized by type and binned into separate files. This is then sent to the Data Management Center at the Space Telescope Science Institution (STScI), where it is archived for further use. The data is then decompressed and sorted by cadence (long or short) and is converted to the FITS (Flexible Image Transport System) format. This is the form that we can then retrieve online through the Mikulski Archive for Space Telescopes (MAST).⁹ Cadence refers to the sampling of the light from the object under investigation. The time between each sample is irregular either by design or circumstance.

From Kepler 6b’s fits files we can plot 2 very similar curves as seen in Figure 1. One of the curves represents the Simple Aperture Photometry (SAP) flux, which is the flux or light incident on the aperture of the spacecraft’s photometer. The other representing the Pre-Data Conditioned (PDCSAP) flux. PDCSAP accounts for possible systematic errors from the spacecraft, and corrects them providing us with a light curve that corresponds to just features of the host star and exoplanet under investigation.

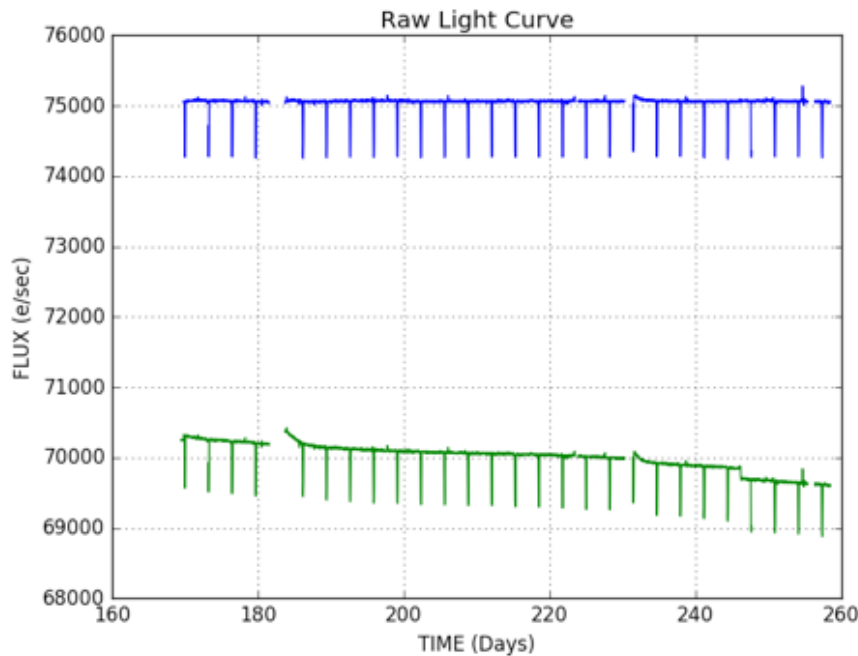


Figure 1: This plot contains two lightcurves. The bottom lightcurve in green represents the SAP flux from the Kepler Spacecraft, whereas the blue curve represents the PDCSAP flux.

2.2 Orbital Period

Focusing on the PDCSAP flux from Figure 1, we can see a period of dramatic change in flux throughout curve. This change in flux is the exoplanet transiting in front of the star. This is referred to as the primary eclipse. To get the orbital period we can take a fourier transform of the data to find the frequency of the primary eclipse. We can see this in Figure 2.

Figure 2 shows two sets of peaks. The first one (which peaks at 80,000 originally) is the correct frequency that leads to the known orbital period for Kepler-6b. We were not able to identify the source of the second set (which peaks at 125,000 originally). More analysis needs to be performed to determine why our data output it. From our data we were able to get an orbital period of 3.234 days.

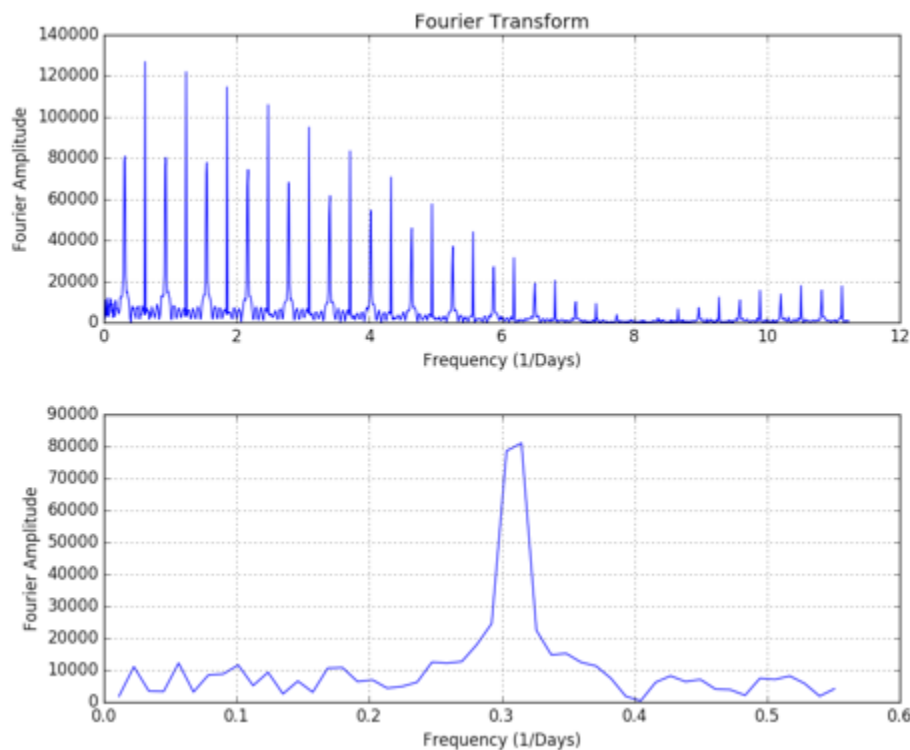


Figure 2: The top plot shows the fourier transform of the PDCSAP flux from the fits file. Our program shows additional peaks which are incorrect and due to unknown factors. The plot below is focused on the fundamental frequency of the primary eclipse.

2.3 Phase-Fold

To improve our data, it is important to phase fold the the entire lightcurve to fit one cycle. For each light curve file the time between samples is not the same (irregular) but we can fill in the gaps of data by folding the cycles of the planet orbiting the star over one another. This will overall improve the Signal to Noise ratio of our observation and define the peak of our primary transit more clearly.

$$\phi = \frac{t - t_0}{P} \quad (1)$$

t is the time of each data point. t_0 is the first data point in each cycle. P is the period of the exoplanet. ϕ is the new coordinate that would be assigned to each data point. This way we can fit each data point in one period or one phase. With each cycle fit to the same phase our long light curve will turn into a phase-folded light curve as seen in Figure 3.

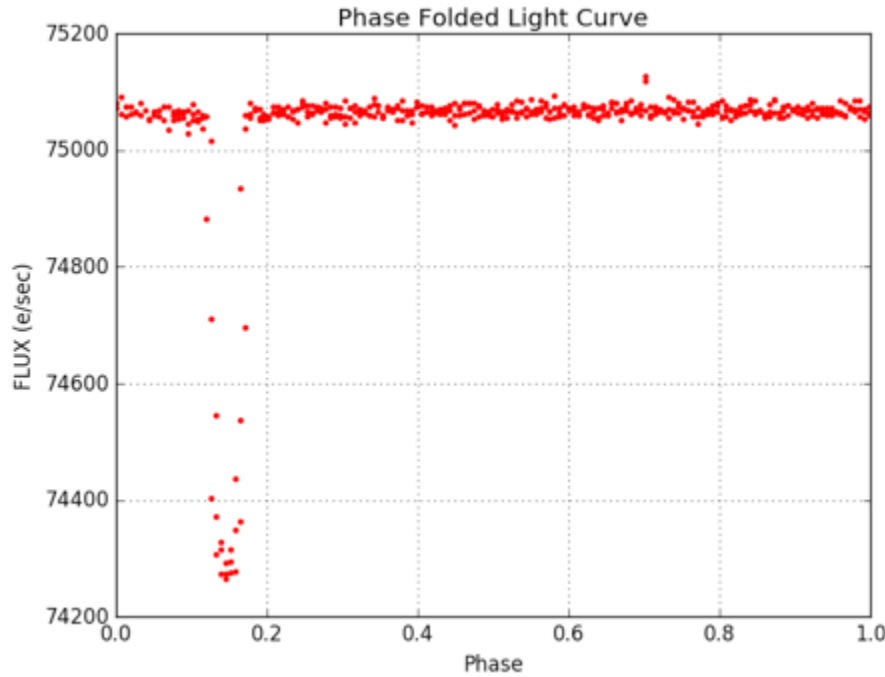


Figure 3: This graph shows the phase-folded light curve. Every data point is fit to the ephemeris, also known as the orbital period of the exoplanet.

2.4 Planet Radius

We are able to relate the radius of the planet from the radius of its host star and their respective flux. The ratio of the planet's flux vs. the star's flux is equivalent to the ratio of the cross-sectional area of the two bodies. We can do this only if we assume that the disk of the star is uniform. The following equation represents this relationship.¹⁰

$$\frac{F_p}{F_*} = \frac{4\pi R_p^2}{4\pi R_*^2} \quad (2)$$

F_p is the flux of the planet. F_* is the flux of the host star. R_p is the planet's radius and star's radius $R_* = 1.39R_\odot$.¹¹ We can see in Figure 3, that the steady or "flat" flux is the combination of host star and planet flux not impeding the other. The large drop in flux, ΔF , is the primary transit (planet passing in front of the star). This translates to:

$$\frac{\Delta F}{F_*} = \frac{F_* - (F_* - F_p)}{F_*} = \frac{F_p}{F_*} \quad (3)$$

To ensure the accuracy of our results, we fit a line to both the average flux and the curve representing the change in flux. The average flux was determined by taking the mean of all data points after the primary eclipse. The curve representing the change in flux was fit to the data points with a second order polynomial function. This is shown in Figure 4. These calculations resulted in $F_1 = 75068.799$ (e-/s) and $F_2 = 74277.855$ (e-/s). Utilizing the relationship from earlier results in a planet Radius of 1.44546 R_j , roughly 1.5 times the size of Jupiter.

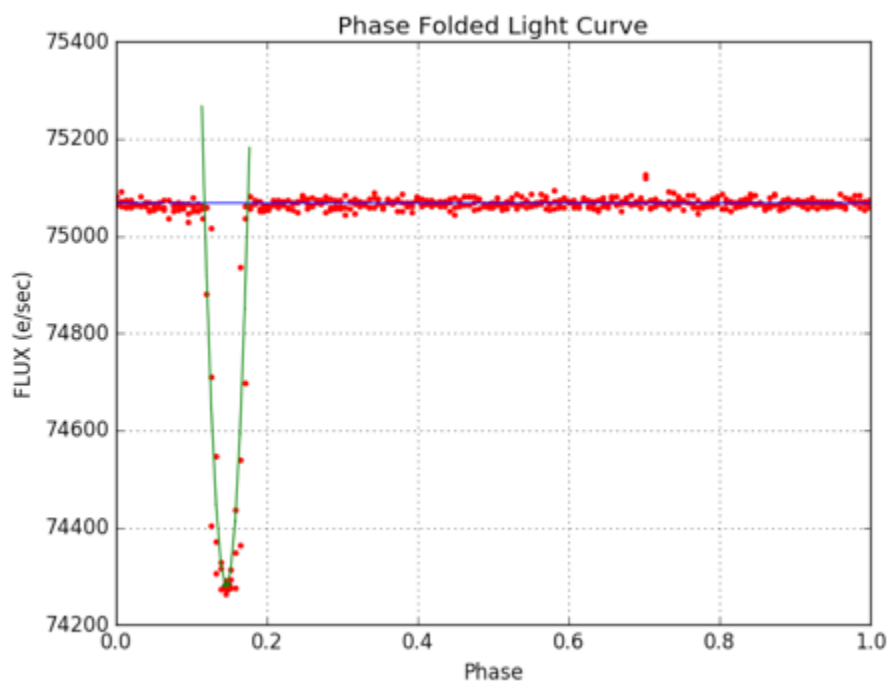


Figure 4: The blue line represents the average of the flux and the green line is fit to the curve. Utilizing this method, we find the minimum value for this curve to better calculate the change in flux.

3. Discussion

We successfully created a python code that plots light curves of exoplanet candidates. For our KOI we successfully calculated the orbital period, and radius. With our program we obtained results which match previous studies.¹² We found our analysis the radius of Kepler 6b to be $1.445 R_J$ and the ephemeris to be 3.234 days. Prior calculations of the radius and ephemeris using our same methods give values of $1.32 R_J$ and 3.235 days¹³, showing that we are within 0.125 and 0.001 of our expected values. These findings give us confidence in the veracity of our results, prior to error analysis calculations. Error analysis on our program allows us to proceed with the study of the secondary eclipse, which is much fainter than the primary eclipse and will require a high level of accuracy. Our ultimate goal is to be able to find the secondary eclipse of the exoplanet to find its effective temperature. When the planet goes behind the star from our view here on Earth there will be a smaller drop in the flux which would give us just the flux of the host star. We would then be able to subtract that from our data and be able to plot the surface flux of the exoplanet under investigation. And after careful study of the units of flux that are provided by MAST we can calculate the effective temperature of the planet.

$$F_S = \sigma_R (T_{eff})^4 \quad (4)$$

The equation above, The Stefan-Boltzmann Law, relates the effective temperature to the surface flux. σ_R is the Stefan-Boltzmann constant. F_S is the flux from the surface of the planet and T_{eff} is the effective temperature.¹⁴

4. Future Research

After establishing the basics of interpreting raw Kepler Data into planetary characteristics, we will perform the same calculations but include error analysis. Additionally, we must identify the error in the fourier transform of the original light curve, that caused the peaks in frequency that we observed. Finally, since we are tailoring the code to fit any light curve file that we input into it, we have to input a range of data points that pertain to each individual file. Due to phases of the planet itself (portion of the planet that reflects light from its host star) the flux of the planet will increase gradually during a single period. If we fit a line to the data points directly before and after the primary eclipse, we can get a better average.

Our long term goal is to have a working program from which we can accurately extract the secondary eclipse data from any Kepler KOI file. Once we have demonstrated that we can do this successfully, we will want to select a number of candidates to subject to this analysis. Using the 76 Kepler Objects of Interest identified in Coughlin's 2011 paper, we will select a sample of suitable objects for secondary eclipse analysis. We can then take steps towards using our program to extract the same data from different planetary types.

About the Authors

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A Home for Lucille Vinyard's Lifework in Humboldt State University Library's Special Collections

Alexandria Jones, Blanca Drapeau, Cathlyn Garibay, KayCie Voigt, Nicole Martensen, Victoria Bruner, Kathleen Bromley, Carly Marino

Introduction

The Library Special Collections are distinguished from the rest of a library's holdings because they require particular care with regard to access and preservation. These collections may be rare books, manuscripts or any other type of unique item. The Humboldt Room at Humboldt State

University (HSU) specializes in acquiring and maintaining special collections relating to the regional, cultural, and natural resources, Indigenous peoples, primary industries, and the history of Humboldt State University (library.humboldt.edu). The Lucille Vinyard collection covers these topics in depth and serves as an ideal reference for students and researchers.

The Lucille Vinyard Collection

Lucille Vinyard (1918-2015) was a leading activist whose work influenced dynamic changes in Humboldt County and the surrounding areas. As an agent of change, she helped to re-imagine what was possible for our nation, the United States Department of Interior and the National Park Service. Lucille initially helped with the establishment of Redwood National Park (RNP) in 1968. She additionally led the charge for the expansion of RNP to protect Redwood Creek watershed and the Park's inclusion with California State Parks in the years that followed. Her remarkable character helped to bring greater awareness to many environmental concerns. Her actions also helped to inspire other young activists' passions. The collection came about as Lucille Vinyard collected materials throughout her life, documenting local activism projects and special interest groups in great detail. In 2016, the HSU Library Scholar Internship began digitizing this work to provide online access to the collection through the Omeka Digital Exhibit Platform. The Lucille Vinyard collection can be accessed at vinyard.omeka.net. The collection's value lies both in its size and the arrangement of files. The collection includes countless newspaper articles, daily journal entries, letters, photographs, legal documents and historical publications. Lucille was meticulous at note taking on subjects and themes within her work. These details reflect significant events in conservational engagement throughout the North Coast area. HSU maintained the handwritten notes and other markers (geographical, temporal and thematic) indicated by Lucille within the collection. The time period of the files ranges throughout her lifetime, with the majority of her work falling between the 1960s to the early 2000s.

Digitalization of a Legacy

Efficient Processing to Creative Design

Processing refers to the acquisition, inventory, and description of a collection. For the Lucille Vinyard Collection, the process began with acquisition of paperwork and the physical movement of the work from the original location of Lucille's home to the Humboldt State University campus located in Arcata, California. The rest of the processing was tedious and time consuming, and involved a detailed inventory at five tiered levels of collection organization. These are the repository, collection, series, file, and item levels. The broadest level of organization is the repository, which is the total holdings of an institution. In the case of Humboldt State University, this is the Library Special Collections. Within the repository, the collection level of organization binds all of the materials in the Lucille Vinyard Collection.

Each individual, report, letter, and map is an item which must be described and documented. In reality, deciding what level to process a collection is more related to constraints of funding and physical space. For example, the decision to process the Lucille Vinyard Collection to a series level was based on the size of the collection, in conjunction with the goal of providing a detailed research guide and making the collection speedily available.

In a collection, a series is a group of files and/or documents that are maintained as a unit. The files within a series may be arranged alphabetically, chronologically, numerically, or by subject. Lucille Vinyard had multiple methods of organization. She had many files in series by subject and also kept chronological files relating to her administrative work as Secretary for the Sierra Club North Coast Chapter.

The Memory of Place: Provenance and Original Order

Although a digital collection is presented in a virtual space, preserving a fully contextual narrative requires attention to the physical spaces occupied by the collection. Provenance refers to the practice of keeping the collections of different creators separate. In theory, the organization of a collection will be similar to how the creator originally kept it. Keeping the collection in original order is easier said than done. Lucille Vinyard kept many organized files, but there were also miscellaneous documents in piles waiting to be filed. In a digital archive, the location information may be available, but the order may change depending on the user influenced search terms and sorting preferences.

A Digital Exhibit Platform Named Omeka

Omeka is a free, open source web-publishing platform used to display digital exhibits. The site works as a functional database to store information about the physical items in a collection. These database items can be curated into rotating exhibits and shared with anyone on the web.

Transforming Physical Archives into Digital Form

Digitizing an archive requires the physical object to be scanned into a virtual format. Although the process of scanning an object from the Lucille Vinyard Collection was straightforward, it was a time consuming process. Without a complete collection inventory, the team of interns had no way of estimating how many items would be available to scan. As an example of best practices, an intern who was enthusiastic about scanning would write down operational instructions specific to the scanner to help identify the best settings for future reference. Next, to prepare the digital space of the item, interns would change the dpi, color, and reflective quality settings on the scanner. One advantageous aspect to prep-work we found in our digitization process of the Lucille Vinyard Collection was the ability to preview and scan every item as a JPEG or TIFF. In doing so, our team was able to define how the item would appear on the screens of digital scholars and online researchers, and how the item could be identified (e.g. title, keyword, description of research item).

After the digitization preparations were developed, our team extended most of their time and efforts toward scanning items. Luckily, as with many enriching and repetitive activities, the more experience an individual/group has with a job, the faster they will excel toward finishing that job. For example, the activity of scanning one 12-month journal, handwritten by Lucille Vinyard, equated to eighteen hours of scanning and prep-work. The journal scanning process eventually decreased to four hours of work. Furthermore, scanning methods and equipment depend heavily on the shape and vulnerability of the object. Photos and documents use a standard scanner. Slides need a slide holder to prevent direct heat and warping and require the removal of the lid cover of the scanner to allow light to show through. Throughout this process, time and care was required for the works being made digital.

Metadata is Information About Information

Because air and light cannot pass through virtual items, the items must be enveloped in words and information, so that a collection can seem authentic and desirable. Metadata is descriptive information about exhibit items. Our intern team crafted standardized terms and phrases for nearly every item that Lucille researched, with the goal of anchoring her research with data so that the collection may be searchable with ease. For example, the digital exhibit platform Omeka.net has a fillable metadata menu which appears alongside every digitized item. A highly collaborative element in our digitization process was the creation of a metadata application profile. Our team developed a comprehensive information profile over the course of three 2-hour meetings.

Access for a Public Audience

In order to gain insight, our team networked with local persons to develop a working knowledge behind Lucille as human and compiled her research into the platform on Omeka.net. Next, we published the myriad of materials on the web so that local researchers, and those at a distance, could interact with this powerful collection.

One focus our team developed alongside our collection management was how researchers might use the collection in their exploration. We found that researchers' interests help decide what items should be featured in exhibits, and what layout may be most user-friendly.

A Gift for the World Community

Preservation and Efficiency: The Benefits of Digitizing an Archive

The digitization of physical archives is now an essential tool for the preservation of archival information. In the past, accessing archival materials meant long hours of travel and many hours searching through an archive. Having a collection inventory available allows researchers to search through potential useful items. It may also allow them to better plan their physical trip to see and handle the collection accordingly in-person.

Repeated use of archival materials exposes them to elements and fatigue. Having a digital copy of research items means less wear and tear on the physical objects, making the artifact available to use in research for an extended time. In the event of a disaster where physical materials are destroyed, there might be a chance that a digital copy can be used to recover and reconstruct some aspect of the physical information and the object itself.

The Lucille Vinyard Collection is published on Omeka.net and the World Wide Web. It is integral that the collection be used and view count be increased. With this work now published on Omeka, publicizing it is important so that others know the research is accessible online. There are many ways to publicize an online collection. Social media is a great way to make works known. Adding a link to the Omeka site from other supportive research domains is encouraged. Furthermore, any professors to whom the work is relevant to the Lucille Vinyard collection, should be notified. All are welcomed to utilize this very special collection, finally home at HSU.

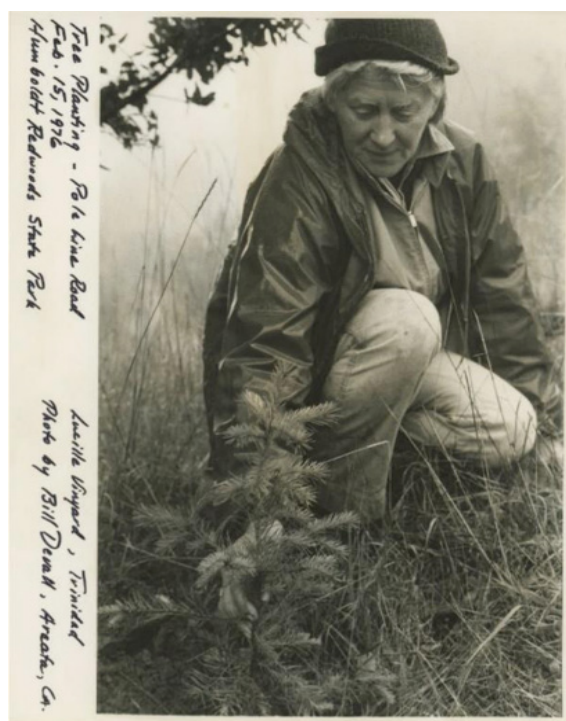


Photo of Lucille Vinyard at Tree Planting for Humboldt Redwoods State Park

February 15, 1976

Image Credit: Humboldt State University Special Collections

About the Authors

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The Consequences of Narrative

Kylie Mossbacher

In order to contextualize the following article, I'd like to disclose as much of my positionality as I can articulate. I am a white woman, raised Catholic in a conservative white household where meritocratic ideas of the self-made man and an up-by-the-bootstraps mentality were ideological staples. The United States was, indisputably, the best country in the world, and any dissenter was welcome to pack their bags and head elsewhere. Animals were for eating, movies were for identity-reaffirming entertainment, and there was nothing more to it. Of course, these are positions held in many families and communities across the United States. We are all products of our socialization, and not all people have the opportunity to critically examine and question their upbringings in an academic setting.

I am currently a graduating senior at Humboldt State University. I began as a Wildlife Conservation Biology student, and later became an Environmental Studies major, a transition that saw an intended Bachelor of Science turn into a Bachelor of Arts. As a result, I have familiarity with scientific language, concepts, and modes of thinking, all of which compose a comfort zone that the curriculum within Environmental Studies has frequently disrupted. Peggy McIntosh's "White Privilege: Unpacking the Invisible Knapsack" exercise was assigned in the introductory course to the Environmental Studies program. By this point, I was a third-year student, still happily embroiled in the same ideology I'd tended since adolescence. This particular activity was world shattering, as it was my first explicit introduction to the concept of white privilege.

Though my formal education was fulfilling, my understanding of this subject was deepened through rather more unconventional studies. I'll readily confess I've yet to read works by more classic theorists, Carol Adams, bell hooks, and Barbara Smith among them, though the individuals who have inspired me are no doubt standing on the shoulders of those aforementioned giants. The outlets most accessible to a panic-stricken me were online essays, blogs, and video series. The blogs *This is White Privilege* and *Racism 101* provided me a well organized, testimony-based, and *private* place to engage with my unexplored and highly socialized racism. Anita Sarkeesian's masterfully researched and eloquently presented series, *Tropes vs Women in Video Games*, and the blog *Feminist Disney* first clued me in to the myriad ways in which oppressive frameworks are normalized through mass media, providing much of the inspiration for exploring the topic of this article. This extracurricular work was equal parts freeing and painful.

I am deeply grateful for this transformative discomfort, however, as it elevated a teenaged, insufferably self-assured me to a new plane of introspection, and fostered a recognition of my own complicity in the state of the world. Most importantly, this experience has shown me the immensity of my own ignorance. That I know this about myself makes my only real career aspiration that much trickier to actualize. For the last five years I've known I wanted to be an educator, someone involved in public outreach, and I remain interested in writing and illustrating storybooks about animals. All throughout my undergraduate career I've spent a great deal of time dreaming up environmentally educational stories. Recently, I've begun to appreciate the complexity of these aspirations, and call them very critically into question.

Environmentalism, its accompanying tenets and underlying ideologies, and all of the narratives it inspires were, for many years, held more sacrosanct to me than anything else had ever been. I was a militant vegan, animal rights advocate, and self-proclaimed eco-warrior. I wielded my self-righteous fervor in the most polarizing, homogenizing, culturally insensitive, and downright racist way possible. That none of the latter were my intentions is irrelevant, as, I came to learn, they are immutable products of the institutions of conservation, environmentalism, and the media employed to communicate those paradigms. I have therefore begun the process of exploring how seventeen-year-old me was created, which

sources of environmental media helped shape my budding positionality, and how, through the narratives I will pen, I might avoid transmitting those harmful, unexamined worldviews to subsequent generations. This brings me to my main concern: problems with portrayal and perpetuation. My goal with this article is less to establish a universal causal link between the representation and subsequent treatment of animals, and more to show that portrayal of animals, humans, and the environment in media is both a reflection and a reproduction of the values society already places on them.

Despite this disclaimer, there remains a sizeable pool of examples of impacts on real animals following the release of numerous animal-focused media. For this analysis, I will be examining children's media with three topics in mind; environmental misanthropy and the vilification of humans, animals as racist, sexist, or otherwise bigoted avatars, and the observable impacts representation has already had on real animals. Environmentalism has strong misanthropic foundations, a tradition that has unsurprisingly bled into children's media. Humans are either actively villainous or imbued with mythic or godlike status that places them above the other characters. 20th Century Fox's 1992 animated feature *FernGully: The Last Rainforest* provides overt examples of vilification of humanity as pitted against nonhuman "nature". The film is set in Australia, but the main protagonists are all white and speak in varying American dialects. Light-skinned, English-speaking fairies with European features speak reverently of humans, and though they are long thought to be extinct by the fairy culture, the movie's protagonist, Crysta, still fantasizes about the opportunity to meet one. Crysta is quick to learn, however, that humans are not the incredible beings she's dreamt of, and are instead witless, destructive, and lazy, wielding tremendously powerful machinery that will level her beloved rainforest. Hexxus, the flamboyant, queer-coded villain, appears to be pollution personified, and easily manipulates the operators of the tree-harvesting machine into heading a course for FernGully. In his song, entitled *Toxic Love*, Hexxus explicitly states his love for humans, as "greedy human beings will always lend a hand with the destruction of this worthless jungle land. And what a beautiful machine they have provided! To slice a path of doom, with my sweet breath to guide it." Batty, a kooky fruit bat that has escaped an animal testing facility, has an entire ballad dedicated to the treatment he endured at the hands of humans. "They used and abused me," he says, "battered and bruised me, red wires, green wires, stuck 'em right through me! I've been brain-fried, electrified, injected and injectified, vivosectified and fed pesticides!" The only human character the audience interacts with is an entitled American teenager who spends the bulk of the movie making fun of fairies and their culture and failing to contribute much overall to the protection or appreciation of the forest.¹

This is not an unusual mechanic. *Watership Down*, a children's novel written by Richard Adams, and the animated film of the same title, casts humans as sources of danger. While it is true that the protagonists are rabbits and so are skittish and fearful by nature, the humans are only ever shown to be cruel, self-serving, and dismissive of the rabbits' plight. In fact, the initial destruction of the rabbit warren by a construction company is the event that catalyzes the story.² The British television series, and the books that inspired it, *The Animals of Farthing Wood*, begins the same way. The forest a ragtag band of woodland critters inhabits is being destroyed for a development project, and they must undergo a harrowing journey until they arrive at a wildlife refuge called White Deer Park. Along the way, several of the animals are hunted³, run over by semi trucks on the highway⁴, or are poisoned from eating vegetables treated with pesticides⁵ -- all perils presented by the existence of and interactions with humans. In Nickelodeon's *The Wild Thornberrys Movie*⁶ and Disney's *The Rescuer's Down Under*⁷ the central conflicts are poaching, and the villains, therefore, are poachers. The dynamics of poaching could be a fascinating subject for children's media, but the complexity of the subject is not given the space it needs in the work, and exploration of the topic is largely unguided by the narrative. The questions what sort of people poach, why might they poach, who purchases the poached animals, and so forth are not asked and are certainly not answered. Again, the audience is left with the impression that humans are greedy, self-interested, and cruel.

As a child, I consumed all of this media voraciously, and the more I consumed, the more conviction I felt. I distinctly remember watching a nature program covering the ivory trade and elephant poaching, and being moved to the point of tears, overwhelmed by the cruelty and my emerging intolerance for it. A frustrated, six-year-old me grabbed the nearest Crayola marker, scrawled “Stop killing the elephants!!” on a sheet of printer paper, and shoved it in an envelope addressed simply to “Africa”. I was livid, and the messaging that humans were the bringers of exploitation and suffering remained locked in the bedrock of my ideology until well into college. As a wild-eyed, hyper-vigilant, and impassioned college Freshman, I was proudly announcing that anyone who poached deserved to be poached themselves. I was condemning all of China for practices I knew neither the history nor the complex intersectional context of. I was celebrating epidemic diseases, thankful on some level that the sinful, destructive human population would in some way be curbed. I championed birth control and sterilization for similar reasons. That this rhetoric was something I so readily embraced and espoused cannot be blamed entirely on ham-fisted, didactic, or single-minded media, and is more than likely due to a confluence of environmental and epistemological factors. Still, if these programs fanned such misguided flames, it seems prudent to avoid the perpetuation of those underlying principles wherever we can.

I am not alone in having held these views. A quick scroll through the Facebook feeds of Jeff Corwin’s⁸ and the National Wildlife Federation Action Fund’s⁹ pages yield a hefty crop of misanthropic comments. While it is widely acknowledged that online comment sections are cesspools of pettiness, reactionary rhetoric, and high emotion, I’d also posit that it is in these places people can be at their most honest, and so analysis of the ideas presented here may not be misplaced. It could be that these adults were brought up on much of the same discourses that created me. Occasionally I’ll overhear fellow artists and aspiring authors say things like “Well, if career option ‘x’ doesn’t work out, I can always just do children’s books,” a sentiment that has always caused me concern. It is critical, to remember that children, in addition to being their own multidimensional people, are adults-in-training, and may well go on to hold positions of power where their decisions will have great reach and even greater impact. These choices will be informed by the lessons and concepts they have internalized from any number of sources, and I would count early exposure to ideas in children’s media among those sources. Some of those children may grow to head big non-governmental conservation organizations, or hold high rank within the Environmental Protection Agency, the United States National Forest Service, Bureau of Land Management, the National Parks Service, or the Department of Fish and Wildlife, among others.

Vilification of humans has likely fed into the Western idea that the “correct” kind of nature is an unpeopled wilderness, where, as the Wilderness Act of 1964 states, “the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain”. Not only is this definition of “nature” and “wilderness” socially constructed, it may well prove to be detrimental for ecosystems and biotic communities that have coevolved with humans over millennia, as the territories occupied by the Yurok and other tribes have. Another truly appalling consequence of this false separation of humans from nature is fortress conservation. Fortress conservation, in a nutshell, is where indigenous groups or others who have occupied a territory for several generations, if not millennia, are, often, forcefully relocated and thrust into poverty, prevented from accessing the resources that enabled a subsistence-based lifestyle. Needless to say, the perpetuation of the humans versus nature narrative cannot continue, with stakes such as these.

Equally as problematic, animals can be used as exaggerated and usually racist avatars for human identities. Disney and its associated companies are the most eminent provider of children’s entertainment, and so provide many of the examples that I will explore. Because the Disney Empire has spanned decades and has seen many directors and creative contributors, it is perhaps not as redundant or single-sourced as it might seem. Tito, a Chihuahua voiced by Cheech Marin in Disney’s *Oliver and Com-*

pany¹⁰, is the main source of comic relief throughout the movie. His accent is overdramatized for humorous effect, and his “full” name (Ignacio Alonzo Julio Frederico de Tito) is rattled off as a hyperbolic joke toward the end of the film. Tito’s area of expertise is hotwiring cars. His diminutive stature is juxtaposed with an exaggerated machismo stereotypically associated with Latino men, saying things like “All right, that does it, Frankie, man! You insulted my pride, that means death!” Being the only character that’s even halfway trying to represent Latinos, he is subject to a tokenism and essentialism that mischaracterizes all Latinos through these microaggressions. *The Little Mermaid*¹¹ has a moment in the popular song “Under the Sea” where Sebastian, a crab given another exaggerated accent, says “the blackfish she sings disco” right as the scene cuts to a fish that does not exist in nature. Designed to have enormous pink lips and heavily shadowed eyelids, wearing a low-cut, sparkling dress and having oil-black scales, this entire caricature is unmistakably hearkening back to blackface, a hideously racist form of makeup application used to mock and exaggerate Black facial features. *Dumbo*¹² has three crows, the leader of whom is actually named Jim Crow, dressed up and behaving in the fashion typical of racist minstrel shows. The characters are clearly poor and uneducated, utilizing slang and African American Vernacular English in a way meant to incite laughter from presumed white audiences. Perhaps most offensively, the birds are all voiced by white actors.

The Siamese cat from *The Aristocats*¹³ was given buckteeth, squinting eyes, a yellow-tinted coat, and a guh-hyucking accent without ‘l’ sounds. The cat plays a piano using two pairs of chopsticks while rattling off the names of Chinese cities and cuisines in a singsong voice. These examples are overt, and, seeing as they all come from time periods when racism was more pronounced, the obvious bigotry of these depictions can be easily avoided by the contemporary author. However, present-day racism is more insidious as it is reinforced and obscured by a dominant culture that likes to think of itself as “post-racial” and “colorblind”. There remains no shortage of examples here, however, as this subtextual racism is evident even in Disney’s 2016 animated film, *Zootopia*.¹⁴ The focus of the movie is the challenge of stereotypes, and while that was successful on some basic level, there were also moments that remained true to the Disney formula. Presumably in response to the rising tide of social awareness sweeping across youth culture in the United States, the makers of the movie made choices that are undeniably attempting to invoke conversations of racial sensitivity. However, as *Zootopia* evidences, animals, particularly animals of different species, can make poor and certainly imperfect analogues for humans and human social conversations. In a moment clearly meant to parallel the reclamation of the “n-word” within black communities, the rabbit character, Judy Hopps, must explain to a well-intentioned colleague that it is okay for one rabbit to call another rabbit cute, but it is offensive for any other species to do so. And later, a fox touches and plays with a sheep’s wool without her permission, marveling at the texture of it. Judy must chastise him, saying that “[he] can’t just touch a sheep’s wool!” This is a direct and indisputable allusion to conversations around bodily autonomy, ownership, and privilege that surround the uninvited touching of black women’s hair. These instances, played as light moments of comedy, seem trivialized in such a context, and, by my evaluation, fail to incite the important conversations that need to be had about racial and cultural sensitivity. It will take deeper levels of thought and study to identify and purge the more problematic, underlying, and structurally racist connotations from my writing and my depictions. Though I am doing my best, I am hardly free from any number of passively absorbed, deeply ingrained, and toxic conceptualizations of animals, people, places, or ideas, and it will take training to recognize those transgressions when they rear their ugly heads.

I also want to focus on the observable impacts certain media releases and general cultural perceptions have had on real populations of animals. My analyses will primarily pertain to the views and perceptions held by dominant cultures of Western Europe, North America, and Australia. There are examples of adverse effects on animal populations in other countries and cultures, particularly where

animals are associated with bad luck, but I, not belonging to nor derived from those cultures, do not feel I have analytical jurisdiction over those cases. It is important to bear in mind that there is a longstanding heritage to human relationships with animals, a heritage that has had the 200,000 years of modern *Homo sapien* coexistence to form. So while Peter Benchley, author of the now world-renowned *Jaws*¹⁵, was indeed the individual to pen the novel that spawned the summer blockbuster, he was building off one facet of an established and ancient human-predator relationship. According to Juliet Eilperin, in her book *Demon Fish*, Peter Benchley “unwittingly did more to instill the intense fear and hatred of sharks than anyone else in the twentieth century”.¹⁶ While Benchley’s book, as Eilperin puts it, is more “cerebral” than the drama and sensationalism of the film, it did characterize the titular shark as though its actions were deliberate, “mak[ing] [it into] a mass murderer and suggest[ing] a sort of conscious strategy on the shark’s part that doesn’t exist in real life.”¹⁷ Because this characterization was so suggestive, the shark became an enemy, an adversary, an opponent, something to be bested and conquered, something against which “man” must prove his dominion. While it is true that sharks have long held the collective fascination of the human species, and have, across many cultures, had strong ties to masculinity and the performance of it, at no point prior to the mid-twentieth century had these relationships been so rapidly commercialized. University of Florida’s George Burgess, a shark biologist, says “the movie initiated a precipitous decline in U.S. shark populations, as thousands of fishers set out to catch trophy sharks after seeing *Jaws*.”¹⁸ Eilperin interviewed several trophy fishing operators, one of whom is Mark “the Shark” Quartiano. Quartiano, who prides himself on killing “at least 100,000 sharks over the course of his career”¹⁹, speaks candidly, revealing that his average customer is “a guy all pumped up, a big-game guy, kind of macho... Usually, it’s guys wanting to kill something.”²⁰ The braggadocio, the blood thirst, the overt appeal to conventional masculinity and its links to dominance are blatant marketing tools for any number of shark-fishing tournaments held along the East Coast of the United States. Jack Donlon, a tournament organizer, struggled to secure enrollment and attendance at his tournaments until, in 2007, he launched the “Are You Man Enough? Shark Challenge” tournament.²¹ The event enjoyed tremendous success, and he never looked back. *Jaws*, it can be reasonably said, glamorized the conquest and defeat of a formidable, ancient predator defined, simultaneously, as soulless, possessable object, calculating, vengeful enemy, and disposable affirmation of human identities.

Wolves have been subject to similar phenomena, though perhaps to a more vitriolic extent, as humans and wolves are both terrestrial species with similar taste in game, and have had more cause to directly encounter one another. With wolves, the hatred and disregard runs deep. Barry Holstun Lopez explores the human-wolf relationship at length in his book, *Of Wolves and Men*, detailing the many ways in which resentment toward wolves was fostered and executed, particularly in the imaginations and cultures of Western Europe and its colonial descendants. In the twentieth century, the country waged a war of extirpation on wolves. According to Lopez, “wolf killing goes much beyond predator control. ... A lot of people didn’t just kill wolves, they tortured them. They set wolves on fire and tore their jaws out and cut their Achilles tendons and turned dogs loose on them. ... In the twentieth century people pulled up alongside wolves in airplanes and snowmobiles and blew them apart with shotguns for sport. In Minnesota in the 1970s people choked Eastern timber wolves to death in snares to show their contempt for the animal’s designation as an endangered species”.²² Apart from the many pragmatic reasons that exist for killing wolves- scientific data collection, population management, economic gain, protection of private property- Lopez asserts that “killing wolves has to do with fear based on superstition”.²³ Lopez posits that “the hatred [of wolves] has religious roots: the wolf was the Devil in disguise”.²⁴ The Bible is perhaps the most well distributed, widely-read, carefully scrutinized, and influential work in existence. During that era of rapid colonization, extirpation, and genocide of the Americas, most if not all of the colonizers were gripped by the idea that they were enacting God’s will, hence the concept of Manifest Destiny. Taming the “wilderness” by converting it into “fertile fields” was God’s work, and the

wolf, being emblematic of all that is frightful and challenging about the wild, was incompatible with that objective. Again, Lopez maintains, “as civilized man matured and came to measure his own progress by his subjugation of the wilderness... the act of killing wolves became a symbolic act, a way to lash out at that enormous, inchoate obstacle: wilderness. Man demonstrated his own prodigious strength as well as his allegiance to God by killing wolves.”²⁵ Cultural fear and hatred toward wolves was represented and reproduced clearly in the stories told of them and the roles they held within folklore. Wolves became the now canonical werewolf, the antagonists in our most beloved and most reprinted children’s stories (*Little Red Riding Hood*, *Three Little Pigs*, *The Boy Who Cried Wolf*), and remain shadowy, nefarious figures in even more contemporary works. It is true, however, that there is a reverence, awe, and mysticism surrounding wolves, an opinion that has been gaining traction among particularly the youth of the United States. The release of Universal Picture’s *Balto*, Stephanie Meyer’s *Twilight* series, Bones Studio’s *Wolf’s Rain*, Studio Ghibli’s *Princess Mononoke*, among others, have popularized wolves and created a space in which the mystique, power, and character of wolves is celebrated rather than scorned. This diverging perception of wolves, fueled and perpetuated by different stories, is complicating the discourse over current management strategies, and it will be interesting to see how the stories we tell of wolves evolve to both respond to and shape public perception.

Not all harms arise from negative portrayal. On several occasions, we can love animals to death just as effectively as we do when we hate them. Pixar’s 2003 *Finding Nemo*²⁶, directed by Andrew Stanton, buoyed demand for clownfish in households across the United States. Scientific American’s Sujata Gupta states that “the demand for tropical fish soared in 2004, when *Finding Nemo* prompted a buying frenzy,”²⁷ and James Prosek of National Geographic reports that “Vince Rado of Oceans, Reefs, and Aquariums (ORA), a hobby-fish hatchery and wholesaler ... [saw his] sales ... jump by 25%. ... Rado says he sells some 300,000 clownfish a year.”²⁸ While it is true that Rado breeds his fish, many aquarium species are collected from the wild using destructive methods. In another National Geographic article, Jane J. Lee writes that “some fisheries are really well-managed... But the Philippines and Indonesia- which together account for about 86 percent of the fish imported into the U.S. have some of the more poorly managed fisheries.”²⁹ Sodium cyanide is the method of choice in these areas, as it stuns the fish and allows collectors to easily scoop them up. However, use of this toxin is contributing to coral bleaching, which kills the reef and renders it unsuitable habitat for many marine species.³⁰ This, despite the fact the film was explicitly about how, perhaps, inappropriate it is to keep fish in aquariums. A study from the University of Bristol found that popularity of dog breeds follows a ten-year trend following the release of popular movies featuring certain breeds. According to the Daily Mail, “the 1943 blockbuster *Lassie* triggered a 40 percent increase of Collie registrations ... over the following two years.”³¹ More astounding still was the 100-fold spike in Old English Sheepdog registrations following the 1959 release of Disney’s *The Shaggy Dog*. Dalmatian registration after Disney’s *101 Dalmatians* in 1985 skyrocketed from 6,880 to 36,714. When Disney was gearing up to release its live-action *101 Dalmatians* in 1996, Dalmatian rescuers were bracing themselves for an influx of eventually unwanted pups. The Independent interviewed Phyllis Piper, founder of the Dalmatian Rescue Service, who expressed her anxieties over the then-upcoming film. “We had quite a lot of extra rescue work after the release of the first film,” she said, “We’re very worried this time, especially as they’ve chosen to use live puppies. The release of the cartoon video ... has already created extra demand for puppies.”³² The Humane Society of the United States has found that 25% of dogs in shelters are purebred³³, indicating that someone at some point paid a hefty sum to own them. With 1.2 million dogs being euthanized annually³⁴, it is likely that some of the surrendered pooches killed were the impulse-purchases of parents succumbing to their children’s wishes after they enjoyed a family film featuring the breed. These last few case studies have an important commonality; they are consumer-oriented, consumer-driven problems.

As artists, writers, producers of media, we have little control over how our audiences will perceive, commune with, and behave following exposure to our work. Like Peter Benchley, who was bewildered at the worldwide response to *Jaws*, we may wind up creating culture-shifting products whose reach and longevity may well outlast us. It might be that, despite our efforts, as in Andrew Stanton's case, to *discourage* a certain practice, we'll instead fertilize the market for it. Many of today's examples have been cast in a negative light, for I felt that was the angle from which they've been viewed the least. However, it cannot be said that those works of film, art, and literature did not have their accomplishments. Prosek concludes his National Geographic entry by saying that "although the movie may have harmed native populations [of tropical fish], Stanton's colorful little character also created a new group of nature lovers, eager to preserve clownfish and their reef homes."³⁵ Can I truthfully say I'd care about nature as deeply today were I not raised on informative and engrossing *National Geographic* and PBS programs, beautifully animated and masterfully told Disney films, and riveting, well-crafted books like *Watership Down*, *Kylie's Song*, *Verdi*, *Stellaluna*, and *Chickens Aren't the Only Ones*? I think not. That these works have profound flaws does not condemn them, and that they inspired some positive change does not absolve them. It is crucial to create, and to create fearlessly and joyfully; the only thing I would ask, as a takeaway from this article, is that we never create carelessly.

About the Author

Kylie will continue researching environmental and conservation narratives and will translate these ideas into accessible children's media. Kylie would like to thank Dr. Sarah Ray, Dr. Janelle Adsit, Dr. Nikola Hobbel, and Dr. Brandice Guerra for their help with her premier children's story, for which she received an ideaFest grant. Readers can contact her about this article and her research at bitbybit.dabblestudio@gmail.com

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