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McNAIR SCHOLARS PROGRAM

Congratulations to the scholar-authors whose work is published in this edition of the McNair Scholars Research Journal. As always, I am impressed with the diverse topics and creative work of our scholars and look forward to their future publications. These projects are, in most cases, the result of a minimum of sixteen weeks of close collaboration with a mentor who is an expert in the scholar's field of study. The opportunity to work in close concert with an accomplished mentor is a key component of the McNair Program. Mentors gave up a large portion of their summer and a significant portion of their spring semester in order to prepare scholars for these projects. Without the expertise of our mentors, scholars would not have been able to produce these high quality projects. On behalf of our scholars, it is my pleasure to dedicate this volume to their mentors.

Dr. Jennifer Zwahr-Castro
Director
McNair Scholars Program

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Performativity in Kendrick Lamar's "The Blacker the Berry"

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Situated within J.L. Austin's Speech Act Theory, this paper examines hip-hop artist Kendrick Lamar's song "The Blacker The Berry", as a speech act functioning as a periperformative of protest language. The methods of Critical Discourse Analysis are used to position the song on Austin's performative-constative continuum in relation to its criticism of intra-community violence within the African-American community. This positioning is considered within questions of identity and power relations in broader American culture. Reviewing Austin's speech act theory, Eve Sedgewick's periperformative, and Hill's felicity conditions of protest performatives, this paper investigates the success and extent to which the song functions as a vehicle for Lamar's message. The powerfully introspective message of "The Blacker The Berry" is crafted through Lamar's use of rhetorical strategies such as reclaiming of abusive language directed at African Americans, repetition of phrases that position him against the oppressive Other, and rhetorical questions that create a delayed volta. These strategies fuel Lamar's exploitation of heteroglossia at work in the text.

Austin and Kendrick: Speech Act Theory Meets Rap

To gain a fuller understanding of how "The Blacker the Berry" functions discursively requires an overview of the linguistic concept of the performative and Speech Act theory, beginning with J. L. Austin's original formulation, and ending with Hill's felicity conditions synthesized specifically for protest. This exploration of the song as a performative stems from the notion that language can be used to shape and create reality, as well as simply describing it. The function of language has been contested at least since the time of the ancient Greeks, evidenced by the discussion of it in Plato's *Cratylus* (Gordon 12). Since that time, traditional thought among linguists and philosophers posited that the primary – and most obvious – functions of language were communication and representation of thoughts, the physical world, and reality in general (Joseph 15). As the field of linguistics developed at the turn of the twentieth century however, Swiss linguist Ferdinand de Saussure shed light on this debate by illustrating the arbitrary nature of the sign, which is composed of the

signifier, the word itself, and the signified, the socially-agreed-upon meaning of the word. This arbitrary relationship between the signifier and the signified reveals that language is not necessarily derived naturally (e.g., the chairness of a chair, or the wateriness of water), but rather meaning is assigned in relation to the meanings of other words – and functions within a system (e.g., *window* in English but *ventana* in Spanish) (Gordon 25). The subjectivity of meaning allows for the use of language to be more than representation, as language philosopher J. L. Austin so aptly observed.

In his highly influential lecture series at Harvard University, Austin proposed a model for identifying utterances that changed or affected reality, rather than merely describing it. Austin's lecture series "How To Do Things With Words", begins by outlining two types of speech acts: constatives and performatives. Constatives represent language in the traditional sense – being used primarily to describe – while performatives are "masqueraders", usually looking like statements of fact but performing actions as they describe it (Austin 4). Austin's theory asserts that the words themselves are the actions, so that the saying is the doing, such as "I promise you" or "I hereby christen the USS St. Mary's." (6). In order for a performative to be successful, or felicitous, Austin delineated what he perceived to be requirements, or the felicity conditions of speech acts (14-15).

The primary focus of these conditions is to ensure that the appropriate context and authoritative actors are participating. For example, for a couple to be wed, the ceremony must follow convention, such as an "appropriate person" like a priest, pastor, or judge officiating at the ceremony, otherwise it is considered void. In a further attempt to categorize the performative and the constative, Austin proposes that the best examples consist of "verbs in the first person singular present indicative active" voice (Austin 5). However he later concedes that, "there are… obvious exceptions all over the place" to this specific grammatical template (57).

Austin also outlines three categories of speech, "the phonetic act, the phatic act and the rhetic act" (Austin 96). These three closely related types of work are performed by the same actual utterance. Austin later renames these speech acts as the locutionary act, illocutionary act, and perlocutionary act, respectively. Though each act is tethered to an utterance, utterances and speech acts are not the same thing. The locutionary act concerns itself with "uttering a certain sentence with a certain sense and reference… 'meaning' in the traditional sense (Austin108). The illocutionary act encompasses "utterances which have a certain conventional force" (108)

Felicity Condition #1
"It must be a commonly accepted convention that the uttering of **particular words** by **particular people** in **particular circumstances** will produce a **particular effect**.

Felicity Condition #2
All participants in this conventional procedure must carry out the procedure correctly and completely.

Felicity Condition #3
If the condition is that the participants in the procedure must have certain thoughts, feelings and intentions, then the participants must in fact have those thoughts, feelings and intentions.

Felicity Condition #4
If the convention is that any participant in the procedure binds her/himself to behave subsequently in a certain way, then s/he must in fact behave subsequently in that way.

Text Box 1

considering this dimension of speech acts as Hill and Butler do, temporally – it "performs its deed *at the moment* of the utterance" (Butler 3); the promise obtains at the moment of its utterance. The third type of utterance is perlocutionary or "what we bring about or achieve by saying something" such as a judge stating, "I sentence you to 247 hours of linguistic study" (Austin 108). The sentencing is illocutionary, happening at the moment; the punishment is perlocutionary, it is a delayed reality. Together, the locutionary, illocutionary, and perlocutionary acts create the tangible effects that potentially ensue from felicitous speech acts.

By his eighth lecture, Austin questions his initial distinction between performatives and constatives, declaring that "to state is every bit as much to perform an illocutionary act, as say, to warn or to pronounce" (Austin 132-133). Even as he acknowledges that performatives and constatives exist on a continuum rather than in a dichotomy, Austin still rules out the possibility of viewing performances of songs or poems as performative speech acts like a blessing or christening. He declared that language in these cases is "used not seriously, but in ways parasitic upon its normal use" (22).

Genealogy of the Performative

Extending Austin's consideration – or lack thereof – of performances as performative speech acts, literary critic J. Hillis Miller argues that Austinian performances, such as promises, are not to be confused with Judith Butler's performances of gender, or even theatrical performances (Miller 225). The term "performativity", from Miller's perspective, has been linked too closely to J.L. Austin's performative speech act. Tracing the genealogy of the term, Miller asserts that,

"Judith Butler appropriate[s] Derrida's modification of Austin's speech act theory and marrie[s] it…to… Foucault's *Discipline and Punish* and his *History of Sexuality: Volume 1*, with Lyotard probably hovering in the background" (224).

This disambiguation of the term, stems from Miller's argument that gender performance is more closely linked to theatrical performance, which Austin dismisses as a speech act in *How to Do Things With Words*. Miller goes on to explain that according to Butler's theory of performativity, the term "as it appears now…means, among other things, the assumption that human beings have no innate selfhood, or subjectivity but become what they are through more or less forced repetition of a central role" (Miller 225). Additionally, to draw on Foucault, one is "disciplined into becoming such and such a person or gender by performing that role repeatedly" much the way that actors perform roles in plays (227). However, when performativity – in Butler's sense – is applied to performances in theater, Miller wryly illustrates the incompatibility of the performances, since it would mean that actors in a production such as *Hamlet* would be "in danger of becoming Hamlet or Ophelia" (225).

Despite his efforts to completely differentiate between Austin's performative speech act, Butler's performativity, and theatrical performance, Miller accedes that each of these "various forms of performativity… have a family resemblance" (233). Miller concludes his argument stating that the common thread among performatives is their ability to act, meaning that even so-called parasites like theatrical performances can affect reality (234).

Enter Sedgwck's Periperformative

Miller's concluding statements create an interesting quandary. Though there is no doubt about the performative ability of poems or songs, it is evident that many of them do not follow Austin's prescriptive grammatical formula. What then, would one call these performances that seem to fall closer to the center of the performative-constative continuum? American scholar Eve Sedgwick has coined the term periperformative to describe utterances that "are *about* performatives and, more properly, cluster *around* performatives" (Sedgwick 67). The periperformative then, not only diverges from the general grammatical standard, but also from one or more of the felicity conditions; it still maintains its ability to perform action, but it might not be complete or intentional in the sense that Austin's explicit performative is.

This notion of the periperformative lends itself to the study of "dramaturgical performance" more readily than the explicit performative does, even allowing for "talking about performative affectivity in a way that would not reintroduce either intentional or descriptive fallacies" (Sedgwick 68). Thus, it is possible for an utterance to have an illocutionary effect and perlocutionary effect despite not meeting all of Austin's performative requirements. Sedgwick declares that utterances' varying "proximit[ies] to an explicit performative" do not decrease the rhetorical force "along an even gradient" radiating out away from a "performative center to periperformative edge" (75). Sedgwick's further mapping of the constative-performative continuum allows for further study of how different utterances can affect reality without having to conform to the conventions of full performative speech acts.

In her exploration of manifestations of protest in different genres of speech acts in her book *Language of Protest*, American scholar Mary L. Hill asserts that protest songs, poems, and chants seem to be periperformatives by their locutionary acts, however they do indeed conform to felicity conditions reworked for protest. Hill "appropriate[es] the base metaphor of Transformational Grammar's deep and surface structures" suggesting that although the surface structures of the studied protest utterances vary greatly from genre to genre, their deep structures function in much the same way that the deep structure of Austin's explicit performatives do, fulfilling the conditions for felicitous protest (Hill 54). Her synthesis of felicity conditions reflects a more detailed consideration of the conditions that are at play in order for protest performatives to be effective. Hill's specific conditions, which classify the first two of Austin's felicity conditions as presuppositions and the last two as aspirations, are found in Appendix 1.

"The Blacker the Berry" as Periperformative

Analysis of the song "The Blacker the Berry", as it is informed by the theoretical framework of speech act theory, reveals the song to be a periperformative of protest, producing tangible effects, like inciting discussion about the identity of Black America, on public platforms such as social media. (Please see Text Boxes 2 and 3 for the complete song lyrics). The song achieves this despite not conforming to the aspirational felicity conditions of protest speech; it does however fulfill the presuppositional conditions of protest. The illocutionary dimension of the song functions as a negotiation of African American identity within WEB Du Bois' double-consciousness framework. The perlocutionary effect on the other hand, is the critical awareness that Lamar has created within the community that has generated subsequent discussions about African American identity. Lamar creates the

illocutionary and perlocutionary acts through the performance of the song. In the lyrics, his use of heteroglossically induced confusion, appropriation of hate-speech, and delayed volta, serve to shock the listener and to initiate a conversation that excavates the audiences' own perceptions of what it means to be African American.

"The Blacker the Berry" (Part I)

[Intro: Lalah Hathaway]
1. They want us to bow down to our knees
2. And pray to the God we don't believe

[Background to Hathaway]
1. Everything black, I don't want black
2. I want everything black, I ain't need black
3. on black, I ain't mean black
4. I everything black, ain't need black
5. Everything black, I don't want black
6. I want everything black, I ain't need black
7. on black, I ain't mean black
8. I want everything black

[Bridge]
1. Six in the morn', fire in the street Burn, baby, burn, that's all I wanna see
2. And sometimes I get off watchin' you die in vain. It's such a shame they may call me crazy
3. They may say I suffer from schizophrenia or somethin'. But homie, you made me
4. Black don't crack, my nigga

[Verse 1]
1. I'm the biggest hypocrite of 2015. Once I finish this, witnesses will convey just what I mean
2. Been feeling this way since I was 16, came to my senses. You never liked us anyway, fuck your friendship – I meant it
3. I'm African-American, I'm African, I'm black as the moon, heritage of a small village
4. Pardon my residence
5. Came from the bottom of mankind. My hair is nappy, my dick is big, my nose is round and wide
6. You hate me don't you? You hate my people, your plan is to terminate my culture
7. You're fuckin' evil I want you to recognize that I'm a proud monkey
8. You vandalize my perception but can't take style from me
9. And this is more than confession I mean I might press the button just so you know my discretion I'm guardin' my feelings, I know that you feel it
10.   You sabotage my community, makin' a killin' You made me a killer, emancipation of a real nigga

[Pre-Hook]
1. The blacker the berry, the sweeter the juice
2. The blacker the berry, the sweeter the juice
3. The blacker the berry, the sweeter the juice
4. The blacker the berry, the bigger I shoot

Text Box 2

     From the first notes of "The Blacker the Berry", the jarringly eerie and hostile atmosphere of the song is created through a cacophonous heteroglossia (Bakhtin), or the representation of differing voices within the song. Bakhtin asserts that within speech, there is the "co-existence of socio-ideological contradictions between the present, between tendencies, schools, circles and so forth, all given a bodily form" – each marking separate linguistic identities (291). In the context of "The Blacker the Berry", the instances of heteroglossia are amplified not only by the choice of identity markers such as vernacular speech and the inclusion of imagery relating to blackness, but also by the fact that different singers are performing different parts.

     The heteroglossia at play consists fundamentally of distorted, indistinct voices. The progression, from primarily unintelligible chanting to muffled but clear vocal performances, resembles a lens coming into focus, preparing the listener for the heated message that follows in the verses. The first few seconds of the song feature classically trained vocalist Lalah Hathaway singing over a distorted and stifled male voice – presumably the artist's – whose performance more closely resembles chanting than singing or rapping.

> 1. Everything black, I don't want black
> 2. I want everything black, I ain't need black
> 3. on black, I ain't mean black
> 4. I everything black, ain't need black
> 5. Everything black, I don't want black
> 6. I want everything black, I ain't need black
> 7. on black, I ain't mean black
> 8. I want everything black

In this introductory chant, the vocalist repeats contradictory sentence fragments that are sonically distorted, with the lyrics aurally muddled by one singer chanting over the voice of another. Additionally, the various fragments are missing key grammatical structures such as verbs and subjects, "I everything black, ain't need black". This compounds the lack of semantic clarity. What is clear however, is the contradictory nature of the fragments that produce a lyrical manifestation of heteroglossia: "I want everything black, I ain't

need black on black / I ain't mean black" From these contradictory voices, a multitude of voices clamor over, against, and with each other, vacillating between the love and hate of blackness. The use of Black English Vernacular, as evidenced by features such as ain't or zero copula (the dropping of the verb be), and the presence of a black vocalist's voice, mark the identity of the singing narrator as a member of the African American community.

Another African American voice that emerges in the song's introductory chant is Lalah Hathaway's. Her vocal performance creates a "binary establishment of 'Us versus Them'" as evidenced by the use of personal pronouns "you" and "us" in confrontational lines such as "you never liked us anyway" (Hill 21). By defining the Other as the oppressor who "want[s] us to bow down to our knees", in line a clearer sense of identity is established. The "Us versus Them" dynamic is heightened in Lamar's muffled, yet intelligible, bridge between the introduction and the first verse in which the narrator bitterly and boldly declares that "sometimes [he] get[s] off watching you die in vain." Because the song draws upon relevant context within the hip-hop community, the African American community, and the United States, it is evident to the listener that the "you" to whom the narrator refers is the dominant oppressive white community.

This heteroglossia is a performance – both in the theatrical and performative senses – of W.E.B. Du Bois double consciousness. In his classic piece, "The Souls of Black Folk", Du Bois explores the stagnation of social progress, that the African American community faced at the turn of the twentieth century, and proposes solutions to facilitate the advancement of the community. He proposed that African Americans are perceived by white Americans from behind a metaphoric veil – limiting their ability to truly see African Americans as humans, equal and

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"The Blacker the Berry" (Part 2)

[Hook Assassin]
1. I said they treat me like a slave, cah' me black
2. Woi, we feel a whole heap of pain, cah' we black
3. And man a say they put me inna chains, cah' we black
4. Imagine now, big gold chains full of rocks
5. How you see the whip, left scars pon' me back
6. But now we have a big whip parked pon' the black
7. All dem say we doomed from the start, cah' we black
8. Remember this, every race start from the black, jus' member dat

[Verse 2]
1. I'm the biggest hypocrite of 2015. Once I finish this, witnesses will convey just what I mean
2. I mean, it's evident that I'm irrelevant to society
3. That's what you're telling me, penitentiary would only hire me
4. Curse me till I'm dead. Church me with your fake prophesizing that I'mma be just another slave in my head
5. Institutionalized, manipulation and lies
6. Reciprocation of freedom only live in your eyes
7. You hate me don't you?
8. I know you hate me just as much as you hate yourself. Jealous of my wisdom and cards I dealt
9. Watchin' me as I pull up, fill up my tank, then peel out. Muscle cars like pull ups, show you what these big wheels 'bout, ah
10. Black and successful, this black man meant to be special Katrikins on my radar, bitch, how can I help you?
11. How can I tell you I'm making a killin'?
12. You made me a killer, emancipation of a real nigga

[Pre-Hook]
[Hook Assassin]

[Verse 3]
1. I'm the biggest hypocrite of 2015. When I finish this, if you listenin', then sure you will agree
2. This plot is bigger than me, it's generational hatred
3. It's genocide, it's grimy, little justification
4. I'm African-American, I'm African, I'm black as the heart of a fuckin' Aryan
5. I'm black as the name of Tyrone and Darius
6. Excuse my French but fuck you — no, fuck y'all. That's as blunt as it gets.
7. I know you hate me, don't you?
8. You hate my people, I can tell cause it's threats when I see you. I can tell cause your ways deceitful
9. Know I can tell because you're in love with that Desert Eagle.
10. Thinkin' maliciously, he get a chain then you gon' bleed him

11. It's funny how Zulu and Xhosa might go to war.
12. Two tribal armies that want to build and destroy
13. Remind me of these Compton Crip gangs that live next door
14. Beefin' with Pirus, only death settle the score

15. So don't matter how much I say I like to preach with the Panthers
16. Or tell Georgia State "Marcus Garvey got all the answers"
17. Or try to celebrate February like it's my B-Day
18. Or eat watermelon, chicken, and Kool-Aid on weekdays
19. Or jump high enough to get Michael Jordan endorsements
20. Or watch BET cause urban support is important
21. So why did I weep when Trayvon Martin was in the street?
22. When gang banging make me kill a nigga blacker than me?
23. Hypocrite!
[Musical Outro]

Text Box 3

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deserving of respect and dignity (Du Bois 3). Because Du Bois uses the term American synonymously with racist white America, the veil can be considered as a "veil of social objectification" (Hale 455).

One consequence of this veil is that the African American, according to Du Bois, lives with a constant "double-consciousness, [the] sense of always looking at [his or

herself] through the eyes of others, of measuring [his or her] soul by the tape of a world that looks on in amused contempt and pity" (3). Dual consciousness then, creates a dichotomy in which the individual must choose between his or her African heritage and his or her American identity, which includes the internalized negative perceptions held by white people. Having to live "ever feel[ing] his two-ness – an American, a Negro… two unreconciled strivings… two warring ideals in one dark body" and longing to "merge his double self into a better and truer self" reveals a conflict of identity negotiation (3-4). Double consciousness is at play in the "The Blacker the Berry" as the narrator declares that he "want[s] everything black" but that he "ain't need black" in the same breath. In the negotiation between the embracing and rejection of his African American identity, the song's narrator parallels Du Bois's quest to merge both "warring ideals" in double consciousness (3). The confusion and disorientation that the listener experiences in the introduction of "The Blacker the Berry", and for most of the song, mirrors the confusion and disorientation that the narrator expresses as he attempts to navigate between his African American identity, and the American identity imposed upon him by society.

As the song progresses through the first and second verses, the narrator continues to seek fulfillment by choosing to perceive himself through one consciousness, rather than two. Lamar structures the verses so that they parallel one another, continues using personal pronouns to alienate the Other from the narrator, and reclaims the language of hate speech in an effort to assert himself as African American, denying the American identity of internalized racism.

Both verses open with the Lamar's puzzling declaration that he is "the biggest hypocrite of 2015." This self-identification,

or self-labeling, hints at the possibility, that in his quest to establish an identity as an authentic African American, something has gone amiss. In the first verse, his declaration that he is an "African American, [an] African" resembles an audible Freudian slip, acknowledging his American identity, then choosing to identify solely as African. The narrator then shifts again, emphasizing his African American identity through the verses with bold pronoun-riddled declarations addressed to the oppressive Other: "You never liked us anyway… You hate my people." The narrator repeatedly contrasts himself with the Other. Those who hate the African American community and "plan to terminate [his] culture" are addressed as "you", while he refers to himself as a member of the marginalized group, "irrelevant to society", by using inclusive pronouns like "us" and the possessive "my" when talking about the African American community.

One of the pivotal tools that Lamar uses to uplift his African American heritage, to undo the damage caused by an oppressive American society, is the appropriation of hate speech. While, this is not a novel occurrence within the hip-hop community, the declarations that the narrator "came from the bottom of mankind" and is a "proud monkey" prove difficult to digest because of their limited visibility as appropriated words. These words, as Butler points out, are loaded with connotations dating back to the history "that is invoked and reconsolidated at the moment of an utterance" and have a "sedimentation of meanings" that are revived when spoken (Butler 36). One way to resist "dominant cultural orders" and attain social power is to "practice and celebrate…devalued linguistic forms and practices (Gal 175). However this method of repeating words that have been used to wound comes with great risk, since it invokes the painful connotation. However,

the alternative seems to be worse: "keeping such terms unsaid and unsayable can also work to lock them in place, preserving their power to injure" (Butler 38). Thus Lamar has chosen to both strip hate speech of its power to hurt, and has attained a level of social power, as he converts previously cruel and disrespectful characterizations of African Americans to affirmations of his African identity.

The use of repetition in these two verses of the song is also worth noting, as it creates a parallel structure between them. Both verses begin with the same cryptic declaration: "I'm the biggest hypocrite of 2015." Despite this vague indication that the narrator might not be as authentic as he has thus far claimed to be, the other two repeated structures, "You hate me don't you?" and "Makin' a killin', emancipation of a real nigga," reinforce the narrator's solidarity with the black community and in contrast with the Other. Some of the most powerful and jolting language comes in the form of the repeated rhetorical question: "You hate me don't you?" This question acts as a statement that conveys both contempt/disgust for the Other, as well as the pain the narrator feels at being the object of the Other's hate.

The final line repeated in both verses simultaneously illustrates the extent of the power that the Other has over the narrator and his ability to free himself from said power. In the first verse, the line appears as: "You sabotage my community, makin' a killin'. You made me a killer, emancipation of a real nigga." Here it is apparent that the Other is so powerful, that this entity has the ability to make the narrator a killer, presumably against his will, that attacks members of his own community– hence the sabotage. It is not clear in the first sentence who is making the killin'. The last phrase, "emancipation of a real nigga" is more cryptic. Considering the song through the

lens of Du Bois' double consciousness, Lamar seems to be sarcastically acknowledging that he is still subject to the racist notions imposed on his own identity – still unable to free himself of the Other's domain. In the second verse however, the subject of the first sentence changes, placing the narrator in the position of power instead: "How can I tell you I'm makin' a killin'? You made me a killer, emancipation of a real nigga."

Here the narrator is making the killing, using force against the Oppressor, who in an ironic twist has created his murderer by the fate of his own hand. The last phrase in the line now takes on a different meaning. Because the narrator is the actor and in the position of power, he is able to reverse the roles of oppressor and victim, thus able to cast off the Du Bois' veil, finally emancipating himself from the burden of internalized racism.

The hook and pre-hook of the song feature artists other than Lamar performing these pieces, adding to the musical heteroglossia of the song. In the pre-hook, a distorted male voice chants the metaphor, "The blacker the berry, the sweeter the juice" three times before varying it with, "The blacker the berry, the bigger I shoot." This perversion of the original saying which is meant to positively characterize blackness, is both an appropriation of the racist notion that black people are dangerous and a vague threat. The hook of the song features personal pronouns linking the Jamaican vocalist Assassin with the same "we" and "I" that feels a "whole heap of pain" because of their complexion. The hook ends with the empowering affirmation that "every race start from the black" leaving the listener outraged at the injustices that those with African heritages have had to face.

In the final verse, Lamar no longer appropriates hate speech, but instead uses

traditional African American identity markers, repetition of clauses, and rhetorical questions to create a volta which unravels the narrator's previous attempt to participate and identify only as an African. Again Lamar opens this verse by stating that he is a hypocrite, much to the bewilderment of the listener. He generally follows the same structure as the previous verses, even bringing back the refrain, "I'm African American, I'm African", only to deliver a brutal comparison between the darkness of the narrator's skin to the "heart… of an Aryan." Though the narrator has asserted that the other is completely alien to himself, they still share a commonality: their blackness – whether it be superficial or deeply rooted. Lamar deviates in structure by leaving out the "emancipation" line, supplanting it instead with references to the African tribes, Zulu and Xhosa, and other African identity markers. He compares their tribal armies to "Compton Crip gangs" that currently wreak havoc on urban communities across the nation.

The second major shift in structure and tone combines the aggregation of cultural references with biting rhetorical questions to create the powerful volta, or turn, in which the listener's perception of the narrator is dramatically altered. The third stanza in the third verse delays the unveiling of the narrator as a hypocrite, by paralleling six different identity markers within the African American community. The phrase "so don't matter how much I say I like to" in the first line is succeeded by a series of cultural markers that progress into more frivolous, even stereotypical ways of identifying African Americans.

> 1. So don't matter how much I say I like to preach with the Panthers

> 2. Or tell Georgia State "Marcus Garvey got all the answers"

In lines 1 and 2, the narrator says he aligns and associates with the strong ideological causes of pro-black entities, such as The Black Panther Party and politician and activist Marcus Garvey.

> 3. Or try to celebrate February like
> it's my b-day
> 4. Or eat watermelon, chicken, and
> Kool-Aid on weekdays

In line 3, the narrator refers to celebrating Black History month as if it were the very celebration of his birth, once again attempting to assert his identity as an authentic Black man. The fourth line however demonstrates a tone shift that marks the subsequent lines as being more frivolous, relating them to popular culture instead of politics or activism.

> 5. Or jump high enough to get Michael Jordan endorsements
> 6. Or watch BET cus urban support is important

In the final two lines of the third stanza, the popular culture references act as identity markers just as powerful and relevant as the initial more politically oriented markers. The references in this stanza index grave subjects to less serious popular ones, as well as from older markers to more contemporary ones – ensuring that most African American listeners could relate to at least some of the references.

In the final three lines of the song, the narrator's struggle to achieve only one consciousness is revealed to be a failure.

Lamar begins with rhetorical questions, that ask, "why did I cry when Trayvon Martin was in the street?" referencing the fatal shooting of an African American teenager in 2012. Horror sets in upon the listener, as the second, scathing question is asked, "when gang-banging made me kill a nigga blacker than me?" followed by the single accusation: "Hypocrite!" The narrator's attempt to completely reject or cut out the American, imposed, white-supremacist facet of his identity comes crashing down in a matter of five seconds. Throughout the song, the narrator tries to find an alternate solution to his double consciousness, instead of marrying his conflicting identities, however, he chooses one over the other in an attempt to become an authentic African American. However, the final chilling lines illustrate how he is still trapped by and behind the veil, and that the song's narrator cannot escape his opposing identities (Du Bois 4). As the final line of the song, there is no conclusion, no cohesion, no neatly wrapped message. Rather Lamar leaves his audience quite disturbed and intrigued, to question for themselves and to join in the discussion merging their own unique voices in the heteroglossic echo of the African American experience.

"The Blacker the Berry": Closing Thoughts and Opening Minds

The emotional response that the song invokes in listeners makes Lamar's portrayal of the narrator's grappling with doubled-consciousness palpable, almost tangible. Though Lamar, himself, does not perform a protest speech act, nor does he call fans to perform acts of protest, he does perform a critical lyrical reflection on the roles within the African American struggle to peel back the veil of doubled consciousness. The heteroglossic layering of voices, the usage of oppositional pronouns, the reclamation of hate speech, and innovative use of a volta invite listeners outside the African American community to join in solidarity with the suffering caused by the segregation instigated by the veil. As a powerful animation of Du Bois' concept, the song does not incite the performance of physical action but instead incites the performance of the linguistic action of discussion. In doing so, this song meets Sedgwick's criteria of the periperformative, lying somewhere in between speech acts of protest and the constative description of reality.

Appendix 1

Hill's Reworked Felicity Conditions For Protest
The Presuppositions
1) It must be a commonly accepted convention that the uttering for, on, or in a public space, of words that challenge social, political, and/or cultural hegemonic power(s), by people interpellated as protesters by said powers, will lead to a margin-center convocativity on said challenge.
2) Protesters articulate and support, in a public capacity, the counter hegemonic utterance(s) and thus, occupy a position on the margin in tension with the power center for that issue.
The Aspirations
3) The actual performance of the protest utterance indicates the presence of appropriate thoughts, feelings, and intentions; whereas the type, interconnectedness, number, and/ or risk context of the utterance(s) serves as an index of commitment to these thoughts, feelings, and intentions.
4) The performance of the protest utterance(s) indicates that protesters will engage in subsequent social actions consistent with the protest position; the likelihood of the taking of consistent social action is related to the type, interconnectedness, number, and/ or risk context of the protest utterance as an index of levels of commitment.

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Acculturation and Traditional Beliefs in Mexican-Americans

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Hispanics of Mexican origin are of special interest to health care epidemiologists who note that Mexican-Americans tend to underutilize conventional health care services. Adherence to traditional Mexican cultural beliefs about causes and treatments of physical and mental illness is viewed as a factor in healthcare underutilization, though little empirical data exists to document the extent of these beliefs and the extent to which acculturation status of Mexican Americans impacts beliefs. The purpose of this study is to investigate the relationship between acculturation status of Mexican-Americans and traditional beliefs about illnesses. Participants who self-reported as being of Mexican origin responded to an online survey which assessed acculturation status and extent of belief in 16 traditional folk beliefs. Participants were categorized as either Mexican-oriented, bicultural, or Anglo- oriented and were classified into high belief and low belief groups. Results showed that while the Anglo-oriented and the bicultural participants were nearly evenly divided between low and high belief groups, over two-thirds of Mexican-oriented participants reported low beliefs in traditional folk beliefs. Despite these differences, there were no significant differences among the acculturation groups in extent of beliefs in traditional Mexican folk beliefs. These results are discussed with reference to the underutilization of conventional health care services within Mexican American populations.

Hispanics of Mexican origin are one of the fastest growing populations in the United States and are of special interest to health care epidemiologists who note that Mexican-Americans tend to underutilize conventional health care services (Villatoro, Morales, & Mays, 2014). Several reasons have been proffered for this underutilization and include a lack of affordable health facilities, lack of bilingual services, and lack of cultural competence from conventional healthcare providers (Rodriguez-Reimann, Nicassio, Reimann, Gallegos, & Olmedo, 2004 ; Rogers, 2010). In addition, adherence to traditional Mexican cultural beliefs about causes and treatments of both physical and mental illness is viewed as a factor in healthcare underutilization. Rogers (2010) found that among those Mexican Americans who choose traditional health care options (e.g., herbs, teas, curanderas) for treatments

of various ailments did so because of familiarity with these traditional methods. In addition, there are certain folk illnesses that can only be treated by healers educated in traditional ways. So while an afflicted individual may display serious symptoms, a healer will be consulted instead of a physician (De la Portilla, 2015).

Traditional health care beliefs that are specific to Mexican-Americans have been grouped into three categories: diseases of internal origin, diseases of emotional origin, and diseases of magical/supernatural origin (Martinez, 1966). Examples of diseases of internal origin are *empacho* and *caida de mollera. Empacho* is the blocking of the stomach or intestines by food, and results in a hard ball forming within the stomach or intestines causing stomach pains. Empacho is typically treated with herbal remedies or by pulling at the afflicted area. *Caida de mollera*, or "fallen fontanelle" is another disease of internal origin that occurs solely in infants. If infants are shaken, dropped, or otherwise suffer a trauma, the soft spot (fontanel) between two bones in the skull may not properly fuse and may cave in. Symptoms include crying and vomiting, and death may occur if left untreated (Castro, 2001). Treatment takes the form of pushing on the roof of the afflicted infants' mouth with a finger or otherwise attempting to gently 'reshape' the skull. A less conventional treatment involves turning the baby over and patting at the baby's feet (West, 1989).

A cultural disease of emotional origin is *susto or* "fright". Susto is attributed to a traumatic or frightening event and is composed of a mixture of somatic and cognitive symptoms, including appetite loss, sleep disturbance, stomachaches, extreme sadness, anxiety, and apathy (Berry, Poortinga, Segall, & Dasen, 2002; Nagayama-Hall & Baragon, 2002). Susto is closely related to major depressive disorder,

posttraumatic stress disorder, and other somatic disorders that are recognized in conventional diagnostic taxonomies (American Psychiatric Association, 2013). Treatment for susto includes oral remedies such as teas infused with orange blossoms or brasil wood. Another treatment is a *barrida* or "sweeping" that is a procedure traditionally performed by a curandera. During a barrida, a curandera 'sweeps' over a person's body with fresh herbs while reciting prayers (O'Neil, 2006). Some people of Mexican descent attribute serious medical illness to cultural causes. This has been recorded most prominently with Mexican American patients who attribute a diabetes diagnosis to susto (Hatcher & Whittemore, 2006; Coronado, Thompson, Tejada, & Godina, 2004; Latham & Calvillo, 2007). In a study done by Poss & Jezewski (2002), 21 out of 22 Mexican-American patients interviewed could pinpoint a specific event that resulted in susto.

A prevalent idea in Mexican culture is that illness can result from supernatural/magical origins. *Mal de ojo* or the "evil eye" is an example of a disease of magical origin and results from a person looking upon someone or something belong to another with envy. People afflicted with mal de ojo experience a number of progressive symptoms such as vomiting, weight loss, and possibly death if left untreated. Newborn infants are of special concern of falling prey to the evil eye. To prevent the evil eye, a person is asked to hold or otherwise touch the infant to 'relieve' any possible mal de ojo before it can take hold. An *ojo de venado* (deer's eye) may also be given to an infant to be worn as an amulet, necklace, or bracelet to protect from the evil eye (O'Neil, 2006). The practice of touching a coveted item, person, or object is also used to prevent mal de ojo. Mal de ojo can also be caused by *brujas*.

Brujas are witches who practice dark magic and are able to inflict curses and other maladies upon people (Castro, 2001; West, 1989). The treatment of mal de ojo and other maladies of the spirit come from curanderos/as who are traditional healers. In treating such afflictions as mal de ojo, a curandera might perform a limpia, or cleaning. Although there are variations of the cure, a curandera typically passes a raw egg over the afflicted's body while reciting prayers. The egg is then placed under the individual's bed, and during the night the mal de ojo is considered to be extracted into the egg and the person cured (Castro, 2001).

Some traditional Mexican cultural beliefs are based in the supernatural and pertain to mythical creatures. *La Llorona* and *la lechuza* are examples of supernatural beliefs linked to illnesses. La Llorona refers to the spirit of a young woman who drowned her children and now haunts waterways crying out for her lost children. One variant of the la Llorona myth is linked to susto. In this myth, inebriated men develop susto if they see and follow La Llorona, at which point she transforms into a frightening skeletal or animal-like form (Fong, 2008). *La lechuza* refers to brujas who transform into owls at night. La lechuza is said to be able to cause sickness and even death to their chosen victims (Castro, 2001; West, 1989).

Beliefs in traditional folklore among Mexican Americans may be moderated by the acculturation status of an individual. Acculturation is defined as change that is experienced when two cultural groups come into contact with one another, with the dominant and more powerful group influencing the direction and rate of acculturation of the less powerful group (Sam & Berry 2006). Acculturation results in affective, behavioral, and cognitive changes that affect a one's cultural values, identity, and behavioral traits. Studies of

Mexicans who migrate to the United States find that such culturally relevant markers as language and patterns of health care usage for physical and emotional problems become altered as acculturation to Anglo norms proceeds (Sam & Berry, 2006). Several studies have found that acculturation affects acceptance of conventional diagnoses and treatment. Cachelin, Veisel, Barzegarnazari, & Striegel-Moore (2000) for example, found that Latina women were more likely to seek conventional treatment for eating disorders than their less acculturated counterparts. Warren (1976) reports that more acculturated individuals held more positive attitudes towards psychotherapy. Nativity status, a major component of acculturative status, was also found to be a factor in health care utilization. Conventional health care utilization was found to be higher in U.S. born versus foreign-born Mexicans (Vega, Kolody, Aguilar-Gaxiola, & Catalano, 1999).

As those of Mexican descent acculturate to Anglo majority norms in the United States, what happens to their beliefs? There is little research on how traditional beliefs relate to acculturative status, despite evidence that both acculturation and traditional beliefs each individually mediate healthcare behavior. For example, it is believed that certain folk illnesses such as mal de ojo can only be cured by spiritual healers like curanderas. One study done with Mexican-American farmworkers found that while they acknowledged the benefits of Anglo/conventional physicians and treatments they still retained the belief that certain illnesses needed to be treated by traditional healers (Slesinger & Richards, 1981). The purpose of the current study is then to investigate the relationship between traditional Mexican beliefs and acculturative status in Mexicans and Mexican-Americans.

Method

Participants and Procedure

The responses of participants who self-reported as Mexican, Mexican-American, or Chicano/a were included in the study (N = 78). Demographic variables such as age, income, and generational status associated with the participants are found in Table 2. Participants were informed of the online survey through email or via word of mouth. After reviewing and agreeing to the consent form, participants answered demographic questions and completed questionnaires on acculturation and traditional Mexican beliefs. The snowball technique was used to sample a wider range of respondents. The survey took approximately 20 minutes to complete. Results were anonymous.

Materials

Acculturative status was assessed using the 12-item Acculturation Rating Scale for Mexican-Americans-II (ARSMA-II-SV; Cuellar, Arnold, & Maldonado, 1995). The ARSMA-II-SV has a reported high correlation with the original ARSMA with $r = .93$ and a Cronbach's alpha score ranging between .79 and .91 (Cuellar, Bastida, & Braccio, 2004). Based on a 5 point Likert scale, the ARSMA-II-SV groups respondents into one of five acculturation levels that range from Level 1 ("Very Mexican oriented") to level 5 (very assimilated; Anglicized"). Based on previous studies using the original ARSMA (Pomales & Williams, 1989; Ponce & Atkinson, 1989) the current study narrowed acculturation levels further, collapsing levels 1 and 2 together to make the category "Mexican oriented" (N = 16) and collapsing levels 4 and 5 together to make the category "Anglo oriented" (N = 38). People who scored as a level 3 were classified as "Bicultural" (N = 24).

The Traditional Folk Belief Scale is a 16-item questionnaire designed by the study's authors to assess illness beliefs and supernatural beliefs. Items for the Traditional Folk Belief Scale were adapted from published case studies on Mexican-American traditional belief systems (Slesinger & Richards, 1981; De la Portilla, 2015; Rogers, 2010). Items were formatted with true scores assigned a value of 1 and false scores assigned a value of 0. Item scores were summed, with higher scores indicating more traditional beliefs. A median split was used to separate respondents into "high believers" (scoring 6 or above) or "low believers" (scoring 5 or below). In addition to the scale's 16-items, qualitative data were gathered on optional free response sections for each of the items.

Results

Chi-square analyses were conducted to test the relationship between level of acculturation and beliefs in traditional beliefs about illnesses. The difference in traditional beliefs among the three groups was not significant $\chi2(2, N = 78) = 2.82, p <.240$. The frequency distribution of traditional beliefs showed Anglo-oriented respondents were almost evenly split between high believers (53%) and low believers (27%). Bicultural respondents had more high believers (58%; N = 14) than low believers (42%; N = 10) and, interestingly, over two-thirds (69%; N = 11) of Mexican-oriented MAs were classified as low believers . The most prevalent illness-related traditional beliefs of the entire sample were belief in curanderos/as and belief in mal de ojo. The most prevalent beliefs in the supernatural were not as frequent as the illness beliefs with the most prevalent being belief in brujos/as and belief in the lechuza.

The qualitative responses of participants providing optional comments on traditional beliefs were of interest.

Responses to beliefs in curanderas and mal de ojo received the most comments. Over one-fourth (N = 28) of respondents wrote about personal experiences concerning curanderas and of these, eight had been personally treated by a curandera. Almost one-third (N = 31) of respondents commented on mal de ojo treatments with the most common being "the egg treatment" or "limpia".

Responses about brujas were interesting. Of the 14 responses, four mentioned men being made to fall in love with spell-wielding brujas and four mentioned 'good' brujas who were benevolent. Fifteen respondents reported stories and experiences of lechuzas that followed certain people or visited people at night or in dreams. Eleven respondents commented about la Llorona, with most stating that their experiences were limited to stories told by others. A few (N = 14) of respondents reported traditional cures for empacho, with many citing a massage or the consumption of certain herbs as a primary cure and a few (N = 15) knew of cures for susto, with sugar water frequently listed as a treatment. Other treatments mentioned for susto included performing a 'sweeping' of the body with herbs or a limpia with an egg for more severe cases.

The majority of written responses mentioned family members (grandmothers, mothers, fathers, aunts, uncles, cousins) as primary sources of knowledge about traditional beliefs. Grandparents and parents were the most often mentioned family members.

Discussion

Results of this study's investigation of the relationship between acculturation and traditional beliefs about causes and treatments of illnesses in a Mexican and Mexican-American cohort indicate that acculturation status does not affect adherence to traditional beliefs.

Although there were no significant differences in the number of traditional beliefs held by those categorized as Mexican-oriented, biculturally-oriented, and Anglo-oriented groups, all three groups reported beliefs in illness related traditions with illness-related beliefs as prominent. To a lesser extent, beliefs in traditional supernatural beliefs such as lechuzas and la Llorona were reported by the three groups.

Possible reasons for this discrepancy include a small sample size. When grouped into three acculturation status groups, it became apparent that the majority of participants were classified as either Anglo-oriented (N = 38) or biculturally-oriented (N = 24). Only 16 participants could be classified as Mexican-oriented. In addition, recruiting for the survey was done in a limited geographical location. It is possible that results would have varied in a sample from a border city. Another limitation is the scale used to measure traditional Mexican beliefs. The scale was created for the current study, so validity and reliability data is unavailable. Other limitations include the fact that demographic characteristics indicate that a large portion of the sample was of college age. However, in spite of this limitation, it is worth noting that traditional beliefs were still surprisingly prevalent.

Research has established that Traditional beliefs about illness and acculturation each individually impact health care choices in Mexican Americans. But as our results indicate it cannot be assumed that acculturation level mediates the degrees of adherence to traditional Mexican beliefs as many of those categorized as Mexican, Bicultural, and Anglo oriented in our sample reported beliefs in a number of traditional folklore beliefs.

The results of this study has implications for conventional healthcare providers. First, providers cannot assume

that traditional healthcare beliefs will or will not be held by the patients being treated, regardless of how acculturated they may appear to be. Second, conventional healthcare providers cannot assume that the use of alternative treatment methods will be reported, especially if the patient perceives a lack of sensitivity to cultural norms and traditions within the health care setting. Perhaps of more concern is that these same patients also reported the use of traditional medications alongside prescribed diabetes medications but did not inform their physicians about their use of traditional medications (Poss & Jezewski, 2002). Another study relates similar findings, with one-third of interviewed Mexican-American patients with diabetes not informing their physicians about their continued use of home remedies along with their prescribed medications (Brown & Hanis, 1999). It is critical that conventional healthcare providers are able to provide culturally competent treatment. If the impact of an individual's culture on their healthcare choices goes unacknowledged, physicians will not be able to provide their clientele with culturally appropriate treatments.

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Table 1

Acculturation in Relation to Traditional Beliefs

Acculturation Status		
Traditional Belief	Mexican Oriented	Bicultural	Anglo Oriented
High Belief	5	14	20
Low Belief	11	10	18
Total	16	24	38

Note. Acculturation status adapted from the ARSMA-II (Cuellar, Arnold, & Maldonado, 1995).

Table 2

Demographic Variables (n = 78)

Age	
18-24	56%
25-34	18%
35-44	9%
45-54	4%
55-64	8%
Over 65 year old	5%
Last grade completed	
7-8	1%
9-12	12%
1-2 years of college	23%
3-4 years of college	21%
College graduate or higher	44%
Annual income	
Less than $20,000	41%
$21,000-$40,000	22%
$41,000-$60,000	21%
$61,000-$80,000	6%
Over $80,000	9%
Time in United States	
All my life	81%
Since age 5	4%
Since age 6-12	9%
Since age 13-17	1%
Since age 18	4%
Generational Status	
1st generation = you were born in Mexico or other country	18%
2nd generation = you were born in USA; either parent born in Mexico or other country	47%
3rd generation = you were born in USA, both parents born in USA and all grandparents born in Mexico or other country	6%
4th generation = You and your parents born in USA and at least one grandparent born in Mexico or other country with remainder born in the USA	17%
5th generation = You and your parents born in the USA and all grandparents born in the USA	12%

Note. Distribution of variables of Mexican, Mexican-American, and Chicano/a participants. Generational status breakdown was retrieved from the Acculturation Scale for Mexican-Americans-II (ARSMA-II; Cuellar, Arnold, & Maldonado, 1995).

Table 3

Traditional Folk Belief Scale Results (n = 78)

Question	N	%
Someone who does not like you can put a spell on you		
True	28	36%
False/I don't know what this is	50	64%
If you admire something about another person (clothing, body feature, etc) it is important to touch that object/person		
True	32	41%
False/I don't know what this is	46	59%
A person's fingernails, hair, or pictures can be used to harm someone by their enemies		
True	24	31%
False/I don't know what this is	54	69%
Items hung above a door (ex: a cross, palm leaves) will keep out evil spirits		
True	36	46%
False/I don't know what this is	42	53%
***Mental illness can be caused by witchcraft and evil spirits**		
True	16	21%
False/I don't know what this is	62	80%
There are both good and evil spirits around us at all times		
True	60	77%
False/I don't know what this is	18	23%
***I believe in curanderos/as**		
True	29	37%
False	49	63%
I believe in brujos/as		
True	29	37%
False	48	62%
I believe in the lechuza		
True	23	30%
False	55	71%
I believe in la Llorona		
True	25	32%
False	53	68%
I believe in duendes		
True	20	26%
False	58	74%
I believe in El Chupacabra		
True	21	27%
False	55	71%
***I have known someone who has suffered from mal de ojo**		
True	41	53%
False	33	42%

*I have known someone who has suffered from empacho		
True	26	33%
False	51	65%
*I have known someone who has suffered from susto		
True	28	36%
False	50	64%
*I have known someone who has suffered from caida de mollera		
True	10	13%
False	68	87%

Note. * = illness-related traditional belief item

Dehumanization and the Indefinability of Humanity
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Where human dignity has not been adequately considered in a philosophy, neither has its obverse, dehumanization. There is little work to reference in seeking a definition and thus little to advance from. In this paper we will come to a conclusion about what is meant by dehumanization. To do that we must first attempt to define the terms "human" and "dignity" as closely as possible. Simply put, we cannot understand what it is to dehumanize if we do not understand what makes us constitutively human in the first place*; a fortiori*, we cannot meaningfully discuss what the basis of our human rights could be. The ultimate thesis of this research is that dehumanization is at the root of many issues threatening human dignity on a philosophical and a practical level. This preliminary work will present a background for long term study into dehumanization in political philosophy.

How Closely Can the Term "Human" Be Defined?

In elementary biology terms any *homo sapiens sapiens* is a human being. In philosophy that question is a rather tall order.

For Cicero being human meant being a rational creature[i], however that is not only exclusive of some groups who may not be able to communicate well enough to show rational abilities such as decision making but it is also inclusive of some beings that we do not view as humans such as some primate groups. For example a definition similar to this is used by the Nonhuman Rights Project led by Steven M. Wise. This group is championing several legal cases to grant basic rights to intelligent animals such as whales, elephants, and members of all four species of great apes due to the scientific evidence that they show self-awareness and autonomy.[ii]

Currently the Nonhuman Rights Project is pursuing four ongoing cases for chimpanzees in New York State named Hercules, Leo, Kiko, and Tommy.[iii] These are ongoing cases and began in December 2013 on the basis that the chimpanzees' intelligence, self-awareness, autonomy, emotions, and social capacity make them deserving of the rights to bodily liberty and integrity.[iv] Hercules and Leo are part of an experiment in Stonybrook which is part of the State University of New York system.[v] Kiko lives alone in Niagara Falls, New York as a pet on private property and was previously involved in the entertainment industry.[vi] Lastly, Tommy is held as a pet in Gloversville, New York and lives alone in a cage.[vii] Wise believes that his plaintiffs

should be sent to live at a sanctuary in North America among other chimpanzees that is as close to how they would live in the wild as possible.[viii] Given the evidence that Wise displays on his website[ix] it appears that the definition of human beings as rational creatures includes nonhuman beings and is not precise enough for our purposes.

In Onora O'Neill's essay *A Simplified Account of Kant's Ethics* from *Matters of Life and Death,* she believes that Kant would agree with Cicero about human life "being valuable because humans are the bearers of rational life."[x] However, she takes it a step further in clarifying that humans can plan and make decisions. The ability to do those things is what sets human beings apart from other animals.[xi]

Finding a definition for "human" is a project for the ages, Heraclitus famously said "one would never discover the limits of soul, should one traverse every road - so deep a measure does it possess (B45)."[xii] Thus far Heraclitus has been correct, human beings are simply too complex to define easily with a broad stroke. Brendan M. Purcell studied these attempts to define "human" in his work *From Big Bang to Big Mystery* in 2011. He studied several insights of what came to be viewed as "central to humanity in classic Greek political philosophy,"[xiii] a brief recitation of these understandings is: Heraclitus' notion that human beings are united by a participation in Logos (also called *xynon*); Aristotle's belief that what makes humans "of the same *nous* [intellect] is their participation in divine reality"[xiv] which he called *homonoia* or like-mindedness; and lastly within the early Greek Christian world, St John's understanding that it is *agape* (a sort of co-personal love) that is the "basis for all humanity."[xv] He also referred to the works of Eric Voegelin and stated that:

[Eric] Voegelin comments on this issue [the difficulty in defining humanity] in the context of his own problematic of a philosophy of history: his reply is in terms of the nature not just of a single human individual but of the whole of humanity. As with Heraclitus, Aristotle and St John, for Voegelin what unites all human beings in the one humanity is not what we know from paleoanthropology: that we're genetically united since we first appeared some 150,000 years ago. What makes human beings human is their capacity to reach out to and be drawn by the transcendent.[xvi]

What the classic Greek philosophers had in common was a belief that a common participation in something is what united human beings or made humans different from other creatures on the planet. Voegelin took this into more modern language in his statement "what makes human beings human is their capacity to reach out to and be drawn by the transcendent."[xvii] Participation in something outside of or beyond humanity is what makes human beings human. This seems like something requiring theological affirmation, however Glenn Hughes has already covered this.

> In order for the concept of inherent dignity to make philosophical sense, there must indeed be a human nature; if there is a human nature, then there must be something *essential to human beings as such*; and something essential to human beings must, by definition, be something beyond all material particularities, which are always changing. If there is a human nature it must transcend differences of biology, culture, and history. Indeed, the concept of human nature, or of a human

essence, presupposes the rootedness and participation of that nature in a dimension of reality not intrinsically conditioned by space and time. The technical term for such an unconditioned dimension of reality is *transcendence*. ...transcendence is best thought of as a dimension of *meaning* - a nonspatial and nontemporal realm of meaning in which humans participate, and which both grounds and completes the meanings implicit in, for example, our morallonging for perfect justice, or our consciousness of the infinite value of each human person."[xviii]

Transcendence takes us beyond virtuous actions, a capacity to reason, or the ability to be autonomous. Transcendence "is simply the manifestation of the living human being in his or her physical presence - a presence almost always vulnerable to suffering, which by its presence alone reveals, and represents, all the potentialities of a human being."[xix]

This is the closest I suggest that we can come to defining the term "human", or at least, so far. A human being is human because of transcendence. We reach out to and seek to understand things far beyond ourselves. When we see another human being we see all of that potential, all of it that transcends everything that person may currently be, and we seek meaning through that. Emmanuel Levinas places this transcendence at the core of his entire philosophical project. "The face turns to me, beseeching or uncaring, imploring or indifferent, eloquent or mute, and inescapably it is, 'in and of itself, visitation and transcendence.'"[xx] If human worth is found in transcendence then "the only philosophically correct anthropology is an apophatic anthropology - that is, one that acknowledges the human inability to know

definitively and completely the meaning of being human."[xxi]

Can We Define Human Dignity?

Next, we attempt to define human dignity and in this effort there will be a survey of prior discussions regarding this definition. We begin with the history of the term. The works of Glenn Hughes and Paulus Kaufmann will be integral to this. Kaufmann identified four traditional sources for a definition of human dignity.[xxii] The earliest source he describes comes from Greco-Roman history and ultimately culminated in Cicero's notion of *dignitas*; the second is of Judeo-Christian origin and is the notion of man having ultimate value due to being created in the image of God or *Imago Dei*; the third is Immanuel Kant's *Würde* over price; and the last is what came of the writing of the Universal Declaration of Human Rights which was adopted by the United Nations in 1948.[xxiii]

Dignitas was primarily a social role, however Kaufmann relates it to human dignity at large due to Cicero's claim that our obligation towards human beings is simply because we are human.[xxiv] The Judeo-Christian conception initially had no political impact and was a moral standard to hold oneself to, if you are created in the image of God there are expectations regarding your behavior and treatment of other human beings.[xxv] Hughes defines the term 'Imago Dei' as "'made in the image and likeness of God,' meaning a creature who participates in a limited way, in transcendent divine freedom, reason, power, creativity, moral concern, and love."[xxvi] This Christian view of human dignity was made more sophisticated by exposure to Greek philosophical insights and remained the foundation for Western descriptions of human dignity beyond the Enlightenment period.[xxvii] Hughes asserts that the influence

of the "Christian anthropological vision of human beings distinctively endowed with freedom, reason, conscience, and creative power"[xxviii] affects even Kant's discussion of dignity in his *Groundwork of the Metaphysic of Morals*. In this work, Kant places dignity (Würde) over any price. Every human being is distinct, humans cannot be interchanged, and they can never be replaced. All human beings share a "basic spiritual equality and an obligation to love and respect each other."[xxix] They are priceless. For Kant dignity was primarily a signifier that humans could not be merely exchanged and that they could never be means[xxx], however in order to have dignity Kant believed that they must be capable of rationality which would exclude some groups such as the severely mentally handicapped.[xxxi] *The UN Charter,* German *Grundgestz*, and the *Universal Declaration of Human Rights[xxxii]* state that human dignity is inherent and cannot be violated. However, they have little to say so far as a definition of human dignity goes, according to Kaufmann. Hughes explains this in his analysis of the definition offered by the *Universal Declaration of Human Rights,* this definition also had Christian roots and those who drafted it sought to remove it from this sociocultural, historical and religious context in order to universalize the notion. They believed that inherent human dignity could carry its own weight and, without that context, it was a concept that could be applied far more universally.[xxxiii]

Kaufmann finds these sources problematic because he does not feel that the definitions they offer can be related to a normative ethical theory in moral philosophy, leaving the definition something of an empty concept.[xxxiv] Hughes addresses this concern by explaining that this removal of a religious or metaphysical context actually makes it apparent that dignity is an "intrinsically heuristic" concept.[xxxv] Where a heuristic is something that calls for investigation or completion, an intrinsically heuristic concept cannot ever be totally discovered or exhausted or defined. Its limits are categorically elusive. What this means is that no matter how much we learn about human dignity and its implications there will always be more. It is similar to science in this way, no matter how much we have learned in the realm of the sciences there is always more. It is also not similar to science in the sense that, while the empirical universe is in principle knowable, human dignity transcends our ability to finally know it. Hughes finds this to be "truly beautiful and reflective of the human character."[xxxvi]

The issue that these sources struggled with in seeking a definition is that human dignity cannot depend upon something that not all human beings have. The definition of human dignity cannot depend upon a relationship with God or having certain mental faculties. Clearly, many do not have such a relationship and some are mentally disabled. It also cannot depend on social class as Cicero's *dignitas* does. Human dignity is something that is universal and must be based on what makes every human being human,[xxxvii] which means it must be stripped of sociocultural context. Rather than use this method, Kaufmann personally seeks a definition of human dignity by looking at what it means to have it violated. If something does not exist then it cannot be violated and, going with this theory, what does violate human dignity could aid in finding a definition.[xxxviii]

Kaufmann began his search for a definition of human dignity because it is the primary foundation of human rights (as the *Charter of the United Nations*, the *Universal Declaration of Human Rights*, and many other documents point out), this concept is meant to set human beings apart from other creatures. It is something used to underscore

those things that make us exceptional from them, notably free will, the capability to make independent choices using our senses of reason and morality, and our individual autonomy. According to Kaufmann the problem is that "philosophers disagree on how to define human dignity and as with human rights, the concept is often regarded as a Western one not applicable to other cultures".[xxxix] However, it was the view that human dignity is a concept of Western culture that the drafters of the *Universal Declaration of Human Rights* were attempting to address in removing the Christian and cultural contexts in their usage of the term.[xl] Kaufmann et al. disagree with this. They believe that any "satisfactory conception of dignity should be able to explain the reality of its violation and should not be detached from concrete occurrences and interpretations in social life, since this is what motivates us to talk about dignity in the first place."[xli]

When people discuss human dignity what they imply is that all members of the human species have this dignity simply because they are human beings. This dignity leads to specific social norms and laws (such as not lying and not killing another person) along with punishments for breaking them. Human dignity is a large part of the basis of a functioning society in this way and Kaufmann theorizes that it has to exist because of certain properties we all share, he is just unable to find all of these properties.[xlii] It is because he sees it as part of the basis of society that he feels it cannot be taken out of all specific sociocultural contexts. Hughes partly agrees with human dignity being part of the foundation of a society. He illustrates that the *Universal Declaration of Human Rights* has an inherent human dignity as its entire basis and that this has echoed in numerous other charters and declarations since this document was adopted in 1948.[xliii] However

he disagrees with the notion being inseparable from specific sociocultural contexts. Kaufmann may believe that separation from a sociocultural background makes human dignity an empty concept due to a lack of knowledge of where it comes from, but Hughes has an answer for that. The answer is that there is no satisfactory philosophical answer to the question of where human dignity comes from other than to acknowledge that if it exists then it is "*given* along with human existence and belongs to human existence *essentially*."[xliv] The immeasurable worth of a human being has nothing to do with achievement, their religion, social status, nationality, or even their ability to act on the things we associate with the concept of personhood: free will, rational and moral decision making, and an ability to define themselves for themselves.[xlv]

Frits de Lange agrees with Hughes that human dignity is something essential that cannot be lost in his essay *The Hermeneutics of Dignity*: "in essence, dignity belongs to the definition of being human."[xlvi] The origin of human dignity is not something that can be found in a life time and is something that we as humans may be seeking indefinitely, thereby giving credence to Hughes's notion of dignity as intrinsically heuristic. If human dignity is something essential as Hughes states then finding the ultimate origin of human dignity would require finding the ultimate origin of human existence. Human beings are as likely to answer this question as they are to find the ultimate meaning of life or what exactly God is or is not. It is interesting that many Neoplatonists struggled with the latter throughout the medieval era, before coming to the conclusion that human understanding can only get so close to answering that. This is clearly stated by Dun Scotus Eriugena in *Periphyseon*:

For the human mind does know itself, and again does not know itself. For it knows *that* it is, but does not know *what* it is. And as we have taught in the earlier books it is this which reveals most clearly the Image of God to be in man. For just as God is comprehensible in the sense that it can be deduced from His creation *that* He is, and incomprehensible because it cannot be comprehended by any intellect whether human or angelic nor even by Himself *what* He is, seeing that He is not a thing but is superessential, so to the human mind it is given to know one thing only, *that* it is-but as to *what* it is no sort of notion is permitted it.[xlvii]

This demonstrates the long tradition in philosophy of trying to say the unsayable, of trying to assert apophatically something meaningful about that which is ultimately unknowable.

While there is debate as to how to define human dignity or where it comes from there is conclusive belief that it exists. Kaufmann continues to attempt to define it by examining how it is violated .Realistically, the ways human dignity can be violated are endless. Kaufmann *et al.*will continue seeking a satisfactory answer indefinitely and that still causes it to fall into Hughes's explanation that human dignity is a heuristic concept.

Frits de Lange and Gerrit Brand also struggle with the perception of a sociocultural context with regards to human dignity but their objection comes from a different direction. Frits de Lange disputes that human dignity may not be able to be considered completely objectively. He states:

> Dignity…is a practice of or exercise in recognition. Therefore, dignity is to be considered an objective, personal "characteristic" and, at the same time, a subjective "projection." Dignity is a relational good that is conceivable only within the interconnectedness of human relationships.[xlviii]

If that is the case, it brings about new issues. If human dignity cannot be something completely objective then it can be argued that those who violate it simply do not see the "subjective 'projection'" of it; and if it is partly subjective then how can it effectively be defended? Laws and rights should not be subjective. If human rights derive from human dignity,[xlix] then this is a serious consideration. Brand approaches de Lange's question directly and with his own words. De Lange asked whether the topic of human dignity could ever be completely objective.[l] In his work, he implied that it was largely noticed when violated (such as the attempt by Kaufmann *et al.* to define human dignity by its violation) and most arguments for it had a strong emotional appeal.[li] Brand believes there must be a sense in which dignity is objective because if there were not then "any concern for the recognition and defense of human dignity is merely a personal preference…something about which one cannot be right or wrong."[lii] De Lange argues that despite his belief that there is no knowledge of dignity apart from human relationships, he still defends its "ontological objectivity," meaning he believes that dignity exists whether it is acknowledged by all involved parties or not. It is in the "ontological fabric of human nature…[and] it can never be forfeited."[liii] Brand uses this as linguistic evidence for the case that there is an objective way to use the term dignity. "At one point de Lange stated that human dignity 'must' be upheld, it was assumed that this 'must' applied to all people, regardless of preference. So even if nobody

did so or even accepted that they should do so it is still true that they should."[liv]

Hughes and de Lange also approach a possible subset of inherent dignity. Hughes explains it most succinctly using his term, "achieved dignity" and both Hughes and de Lange make a distinction between achieved dignity and inherent dignity. What follows is Hughes's explanation of achieved dignity:

> Of course, in the Declaration's vision, we always (ontologically if not politically) possess our dignity-based rights, whether or not, in enjoying these, we actually pursue dignified living. Bearing this distinction in mind will help us clarify the fact that the concept of dignity is employed in the Universal Declaration in two distinct ways - or better said, the term *dignity* functions heuristically in two separate manners. On the one hand, the Declaration is concerned to specify, proclaim, and promote the observance of those rights that will allow for the *achievement* of dignified living. It thus projects a concept of *achieved human dignity*. On the other hand, and of course more foundationally, the Declaration begins with the avowal that persons are "born" with dignity, that persons have an *inherent dignity*, an innate worth, which does not have to be sought or strived for, and which has nothing to do with achievement.[lv]

Hughes holds that achieved human dignity is as much a heuristic model as inherent human dignity and that it entails living a dignified human life. Achieved dignity does not stand alone, it has the heuristic concept of inherent dignity as its base. People have the right to the opportunity to have a dignified life (or to achieve dignity) because they are born with inherent dignity.[lvi] It is inherent dignity that gives people "an inalienable right to those conditions and opportunities that allow us to freely and fully develop as persons."[lvii] So, what is a dignified human life? According to Hughes a dignified human life is one that grants us the ability to develop into people that are "freely and responsibly capable of self-determination through our capacities to imagine, understand, know, and decide";[lviii] and to be aware of the fact that we are irreplaceable.[lix] Hughes's comments on "achieved dignity" follow in the Catholic tradition, exemplified in the 1965 encyclical *Gaudium et Spes.* Here, the term "dignified life" is explained.

Hence man's dignity demands that he act according to a knowing and free choice that is personally motivated and prompted from within, not under blind internal impulse nor by mere external pressure. Man achieves such dignity when, emancipating himself from all captivity to passion, he pursues his goal in a spontaneous choice of what is good, and procures for himself through effective and skillful action, apt helps to that end.[lx]

De Lange explains the relation between inherent and achieved dignity using a painting analogy: the primer (he names it *Menschenwürde*) is the general dignity shared by every single human being and is the reason respect is owed to others. Everyone has it because they were born human and it is a powerful weapon against any sort of discrimination. The next is the underpainting (he terms this *Merit*). This is connected to positions within society and is a sort of social dignity. In this usage of the term, people are not equal. This sort of dignity is an achieved dignity.[lxi]

It seems that we have come to as close to a conclusion as possible on these issues. Human dignity cannot be completely

defined or understood because of its status as a heuristic concept but it can be at least partially described. Brand illustrated that human dignity is objective and exists whether people choose to acknowledge it or not. De Lange seems to have agreed in some ways, but if he becomes lost, it is because some take objective concepts and make them subjective by adding opinion. We have seen Kaufmann *et al.* and Hughes state that it is something inherent that cannot be taken or lost. Finally, we also learned that inherent dignity is a heuristic concept and that achieved dignity follows from and is explained by it. Inherent dignity remains inexplicable in an ultimate sense and we explored several of the implications of this.

Defining Dehumanization

Taking into account our approximate definitions of "human" and "human dignity," it may be simple to infer that dehumanization is just the exact opposite: defining dehumanization as "a negation of positive qualities such as individuality, autonomy, personality, civility, and dignity."[lxii] In Kantian terms, it is treating a human being like a mere means to another end. Any time that someone is involved in a situation under coercion, deception, or in which they could not otherwise truly consent, they are being used as a mere means and being dehumanized.[lxiii] However it is still more complex than that. Dehumanizing comes with motives, methods, and what Sophie Oliver calls "the 'lived experience'" of it.[lxiv]

The most basic definition is simply denying the humanity of a single person or group of people.[lxv] Oliver looks to the work of Herbert C. Kelman for a more detailed example. Kelman defines dehumanization "as a violation of the two qualities that he suggests we must accord to a person in order to perceive them as fully human: identity

and community."[lxvi] He defines identity as seeing the person as an independent and distinguishable individual who can make their own choices. Losing that is "among the most devastating losses suffered by victims of dehumanization."[lxvii] He then goes on to define community as a simple network of independent and distinguishable individuals that recognize and respect one another. Dehumanization shuts a person out of that.[lxviii]

Dehumanization strips a person of "identity, spirit, agency, autonomy, recognition, physical health, strength and beauty, autonomy and of voice."[lxix] This 'others' someone to such a degree that other people have no difficulty murdering or torturing them, it can 'other' a group so much that genocide becomes unobjectionable, and bystanders feel no remorse for doing nothing to stop it.[lxx] The existence of dehumanization renders the ideal of human rights based on human dignity unstable. Dehumanization is something that needs to be further examined in our society because it is how any act of humiliation, degradation, violence, or terror with a human origin begins. Once a person is misperceived as inhuman or subhuman there is no reason to feel remorse because they are perceived as "outside the scope of moral responsibility"[lxxi] by the perpetrators. In most cases, acts of violence only serve to reinforce the views the perpetrator has and may often lead to an escalation of the situation. Worse still, the victim is also often left feeling inhuman or subhuman, like they no longer belong to their community, and like this was something deserved.[lxxii]

It is for these reasons that dehumanization is responsible for instability in the ideal of human dignity. This is why everyone has a personal obligation to respect the rights and freedoms of others in the human community. The *Universal Declaration of Human Rights* concludes that

taking that obligation seriously is indispensable for the development of a bettering society based on equal human rights.[lxxiii] To combat dehumanization, respecting the rights of not only others but also oneself is absolutely necessary. One must never treat any person as a means, not even oneself.[lxxiv] Lastly, no matter how "abject and foreign" some aspect of a human experience may be we must "acknowledge the specificity of [that] person" because in so doing we validate the "place of the other alongside the self within the human community."[lxxv]

Dehumanization is a complex sociocultural issue. It is involved in politics, economics, religion, education, and every other aspect of every human society. Any time that someone is singled out of a group or is seen as beneath another is a manifestation of dehumanization. So ubiquitous, it can happen in primary school even as it can happen in global politics. Dehumanization is a potential of every human person and that is something that must be recognized in order for us to begin changing our worldview. We now have a definition for dehumanization and a stark view of the worst case scenarios that it leads to.

Conclusion

Human beings recognize one another through a mutual understanding of transcendence on some level. When we see a person we intuitively know that there is far more than we can view on the outside. This is the very ground of ethics, as Levinas might say. Furthermore, as Brendan Purcell puts it, "what unites us into one humankind is our orientation to the same transcendent ground."[lxxvi] Dignity is an inherent part of every person's own humanity. Dignity is inseparable from humanity, no matter what is done to a person. No matter how we view other human beings and no matter their living situations, our failure to see them as dignified human beings does not strip them of dignity.[lxxvii] While one can achieve a sort of dignity through being enabled to lead a dignified human life, whether they do so or not they already have dignity embedded in their very humanity. We all know this in our bones even if it is not something we as individuals had put words to. The only way we can harm someone else is to ignore that dignity. We do not harm people we see as equals, people harm other people that they see as less deserving than they are. Dehumanization is at the root of every crime against another person because one must first see that other person as subhuman or inhuman in order to harm them. This makes dehumanization the greatest threat to society.

This paper is part of an ongoing study into the role of dehumanization in contemporary political philosophy.

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[lx] Paul VI. Gaudium et Spes. December 7, 1965. Papal Archive. The Holy See. <http://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_cons_19651207_gaudium-et-spes_en.html>

[lxi] D Frits De Lange. "The Hermeneutics of Dignity," 17-20.

[lxii] Kaufmann et al. "Humiliation." 85.

[lxiii] Onora O'Neill "A Simplified Account of Kant's Ethics."

[lxiv] Kaufmann et al. "Humiliation." 85.

[lxv] Kaufmann et al. "Humiliation." 86.

[lxvi] *Ibid.* 88.

[lxvii] *Ibid.*

[lxviii] *Ibid.*

[lxix] *Ibid.* 89-90.

[lxx] *Ibid.*

[lxxi] *Ibid.*

[lxxii] Kaufmann et al. "Humiliation." 93.

[lxxiii] Glenn Hughes. "The Concept of Dignity," 11.

[lxxiv] Onora O'Neill "A Simplified Account of Kant's Ethics."

[lxxv] Kaufmann et al. "Humiliation." 96.

[lxxvi] Brendan Purcell "From Big Bang to Big Mystery." 322.

[lxxvii] Beverley E. Mitchell "The Givenness of Human Dignity: A Response to the Essays of Frits de Lange and Hendrik Bosman." In *Fragile Dignity: Intercontextual Conversations on Scriptures, Family, and Violence*. Atlanta, Georgia: Society of Biblical Literature, 2013. 69.

Examining the Relationship between Healthcare Coverage and Nativity Status Among Hispanic Women
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According to the U.S. Census Bureau, 42 million Americans do not have health insurance. Hispanics, the fastest growing racial/ethnic group in the United States, are most likely to be uninsured. Drawing on recently collected data from the 2006-2010 National Survey of Family Growth, the author examined whether foreign-born Hispanic women are more likely to report intermittent health insurance coverage than native-born Hispanic women (N = 12,218). The author calculated a crosstabulation table and chi-square statistic to determine whether nativity status and healthcare coverage are significantly associated with one another. While only 30% of native-born Hispanic women report intermittent health insurance, over half (57%) of foreign-born Hispanic women report gaps in coverage. These results suggest that controlling for race/ethnicity is not enough when studying health insurance coverage. Indeed, foreign-born Hispanic women seem to be particularly vulnerable when it comes to attaining full-time healthcare coverage.

Introduction

According to the U.S. Census Bureau (2014), to be considered insured one must have either private or government--sponsored health insurance coverage. The most recent data obtained by the U.S. Census Bureau indicated that 42 million Americans were not insured (Smith, 2014).Of those Americans, 9.8 percent of non- Hispanic Whites were uninsured, while 15.9 percent of Blacks were uninsured, and 24.3 percent of Hispanics were uninsured (Smith, 2014). Of the minorities surveyed, Hispanics are the largest uninsured population. This is a problem because Hispanics are the fastest growing ethnic group in the United States. Hispanics make up 16.4% of the United States' population and will increase from 16.4% to 25.7% by 2050 (Jackson, 2013). Hispanic women are one of the least covered minority groups in regards to health-care, with more than 38% of Hispanic women being uninsured in the United States (Jackson, 2013). This study asks whether a Hispanic woman's nativity status decreases her chances of being insured. Although race/ethnicity does correlate with whether a woman has healthcare coverage, this study examines whether nativity status plays a role in health-care coverage.

Background

When examining the correlation between nativity status and healthcare coverage among Hispanic women, origin cannot be absent from health-care statistics. This is because a person's nativity status heavily influences a woman's choice and opportunity to obtain health-care. Nativity status refers to being a foreign-born citizen (i.e. immigrant) or native-born citizen. Being Hispanic in America ultimately means one's lineage traces back to a different country. As data sets, like the National Survey of Family and Growth have shown, citizenship is one of the most fundamental factors that correlate to healthcare access (Balcazar, 2015). A person's citizenship status may affect his or her opportunity for healthcare coverage. By not being a citizen of the United States, one cannot qualify or enroll in government --- sponsored programs such as Medicare, Medicaid, or the Affordable Care Act (Balcazar, 2015). Immigrants must live in the United States for five years before the can gain access to various health care programs. The issue of citizenship is the principal reason for low rates of insurance coverage among Hispanics (Balcazar, 2015). The U.S. Census Bureau stated that in 2013 the percentage of the population with the lowest amount of insured people were noncitizens or foreign-born citizens (Smith, 2014). There was 3 times the amount of noncitizens without healthcare insurance compared to native born citizens in 2013(Smith, 2014). Not only did noncitizens lack private healthcare providers, they also did not have government healthcare coverage (Smith, 2014).

Another crucial aspect of citizenship is a person's generational status. The longer an immigrant's family has been in the country, the more assimilated they become. Assimilation affects one's behavior and attitude towards healthcare. According to Balcazar (2015), " Higher immigrant generation, with deeper familial roots in the United States, are more likely to have health insurance and a usual source of care than are lower immigrant generations" (p. 120). Balcazar (2015), also concluded that first generation and second generation naturalized and foreign-born Hispanics had greater healthcare disparities compared to third and fourth generation Hispanics. The amount of years Hispanics have lived in the United States also affects their knowledge of the English language and can be a barrier as well (Lee, Godstein, Borwn, & Ballard-Barbash, 2008). English language proficiency, which has been shown to be greatest from the third generation onwards in Hispanics, also plays a part in health care usage (Lee, Godstein, Borwn, & Ballard-Barbash, 2008). Language barriers affect foreign-born Hispanics ability to comprehend healthcare jargon and advertisement. These obstacles increase foreign-born Hispanics' hesitations towards obtaining healthcare coverage. It has also been proven that foreign-born Hispanics are less likely to spend on health care rather than naturalized Hispanics and native-born Hispanics (Bustamante, 2009). However, the longer a foreign-born Hispanic has been in the United States and has been assimilated, the more likely he or she is to spend on healthcare (Bustamante, 2009). Generally, noncitizen Hispanics with less education, poverty- level income, and noncitizen Hispanic women experience health expenditures, but are unwilling to pay out of pocket or to obtain healthcare coverage (Bustamante, 2009).

The issue of Hispanics' nativity status is a barrier not only for access to health-care but their socioeconomic status as well. Citizenship affects many different areas of minority groups' lives such as

education, which ultimately affects their income. Additional factors impact native-born Hispanics' choice to utilize healthcare services. The factors include accessibility to healthcare coverage, the ability to afford the costs associated with purchasing preventative care, and apprehensions regarding treatment by healthcare professions (Young & Rabiner, 2015). Cultures of every ethnicity are constantly changing and these changes affect how people interact with each other and even transcend into healthcare professionals and their patients (Diallo, 2013). A person's perception and behavior towards healthcare coverage is usually conceived from their culture, social norms and heritage (Diallo, 2013). A health-care provider must be aware of cultural backgrounds of patients to better health-care service and to improve a patient's future care seeking behavior (National Center for Cultural Competence, 2015). The United States government has recognized the need for cultural competency and has created initiatives to improve healthcare providers' cultural competency so that minorities receive the best healthcare (Diallo, 2013). A health-care provider must be aware of cultural backgrounds of patients to better health-care service and to improve a patient's future care seeking behavior (National Center for Cultural Competence, 2015).When examining the relationship between healthcare coverage and nativity status among Hispanic women, cultural competency will expand our understanding of such correlations.

Current Investigation

This study examines what the role of nativity status in predicting healthcare coverage among Hispanic women. When predicting healthcare coverage among Hispanic women, it is apparent that many other aspects of health-care in relation to Hispanic women has been conducted, except

for the odds of Hispanic women obtaining health insurance compared to various other races. There has been research on the health disparities of Hispanics (Alegaria, 2012), the health problems a majority of Hispanic women are diagnosed with (Hallquist, 2010), the lack of insured Hispanics (Alegieria, 2012), and how to target Hispanic audiences so that they can be educated on the importance of insurance and health-care (Aaronson, 2013). Past research addresses the causes of healthcare disparity, but fails to acknowledge why foreign-born Hispanic women may be less likely to have healthcare coverage than their native-born counterparts.

The lack of health-care coverage is not a new subject; however the enactment of the Affordable Care Act (ACA) is new. As the Hispanic population grows, it is imperative that racial/ ethnic healthcare disparities are addressed and improved. As citizens of this country, we are all entitled to have an equal access to healthcare. This notion is the primary reason for the enactment of the Affordable Care Act. The ACA was intended to create equal opportunity for citizens to have quality healthcare (Aaronson, 2013). This study will fill the gap of previous research by examining the role of nativity status in healthcare coverage. The findings of this research will be relevant because of how many positive results President Obama promised. If the Affordable Care Act does not narrow healthcare disparities based on race/ethnicity and nativity status, then our government has failed to provide universal healthcare to its citizens.

Hispanics are one of the most underrepresented and uninsured minorities in regards to healthcare (Ng'andu, 2012). Among American Hispanics, some health concerns and trends include: obesity, diabetes, and unplanned pregnancy. These

issues have been acknowledged with the enactment of the ACA. This has resulted in the opportunity for the health equity of minorities is expected. With the increasing emergence of the Hispanic population in the United States, the need arises for the healthcare equity and health insurance of Hispanic citizens (Hallquist, 2010).

Methods

The National Survey of Family and Growth was conducted in July 2006 through December 2010 and is based on a national probability sample, representing the household population of the United States, ages 15-44 years. The entire sample consists of 12, 279 female respondents. The final sample was further restricted to 12,218 women who provided valid reports of their healthcare coverage. The NSFG is appropriate for the purpose of this investigation because it is a recently collected nationally representative data set that asks questions about the healthcare coverage, race/ethnicity, and nativity status. I predict foreign-born Hispanic women are more likely to report intermittent health insurance than their native-born counterparts.

Dependent Variable

The dependent variable in this study is a dichotomous measure of whether the respondent lacked healthcare coverage at any time within 12 months of the interview. Response categories include 1= yes and 5= no. The three women who refused to answer the question and the 58 who did not know the answer to the question were not included in the sample.

Independent Variable

The main independent variable of interest used in this study is a five-category response measure of race/ethnicity. Respondents fall into one of four categories: White, African-American, native--born Hispanic, foreign--born Hispanic, and other.

There were no missing responses for this variable.

Analytic Strategy

First, I create a crosstabulation table designed to display a distribution of cases by their values on two categorical measures (i.e. race/ethnicity and healthcare coverage). Second, I analyze this joint frequency distribution with a chi-square statistic to determine whether the dependent and independent variables are significantly associated with one another.

Results

Roughly one-third (28.8%) of women living in the United States report having intermittent healthcare coverage within the last year. About half the sample (51.4%) identify as White, approximately one-fifth (20.6%) identify as African-American, 11.7% identify as native-born Hispanic, and 10.4% identify as foreign-born Hispanic.

Figure 1 shows that foreign-born Hispanics are most likely to report intermittent healthcare coverage within the last year than any other racial/ethnic group. While only one-quarter of White women (24.6%), one-quarter of African-American women (27.2%), and one-third of native-born Hispanic women (30.3 %) report intermittent healthcare coverage within the last year, more than one-half of foreign-born Hispanic women (56.8%) reported intermittent healthcare coverage. A Pearson chi-square statistic (58; p-value = .000) is statistically significant suggesting that a significantly higher proportion of foreign-born Hispanic women report intermittent healthcare coverage and other racial/ethnic groups.

Figure 1

Percentage of Women with Intermittent Health Coverage in the Past Year
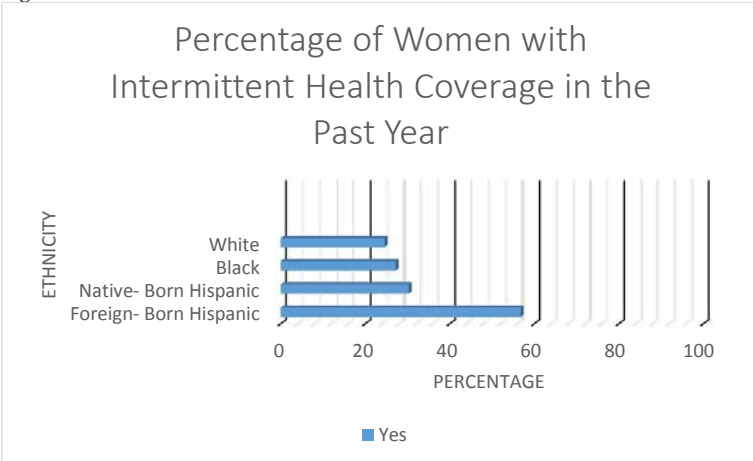
Discussion

About one-third (29%) of women living in the United States report intermittent healthcare coverage within the past year. . Foreign-born Hispanic women are particularly at risk with over half (58%) reporting gaps in insurance. If Hispanic women are uninsured, this affects the livelihood of their families and their future kin. Healthcare behavior is usually a socialized trait that starts at home. The more Hispanic women become insured, the more likely the trend of Hispanics being uninsured will change. This change can be initiated by policies. It can be inferred that policy makers have not yet focused on the various impediments foreign-born citizens endure, including how such hindrances comprise access to healthcare coverage. Immigration reform and the Affordable Care Act are two very controversial topics that are symbiotic entities when being discussed. Future immigration reforms should address healthcare issues because of the influx of foreigners' migration to the United States and their need for access to healthcare coverage. As of now, the ACA focuses on the needs of native-born citizens. However, the ACA is still a very new initiative, yet-- with the increase of studies that focus on the needs and circumstances of foreign or native-born citizens, health-care disparities can decrease.

There are several limitations to this investigation. First by only focusing on Hispanic women, healthcare inequalities that affect men were not discussed or examined. Examining both genders and the nativity status of each sex could decrease the percentage of Hispanics lacking healthcare coverage. Second, due to sample size constraints, this study did not include a nuanced measure of Hispanic ethnicity (i.e. Mexican, Puerto-Rican, Columbian, etc.). Lastly, this study does not include the region respondents reside in. An Hispanic living in

a heavily populated Hispanic area (i.e. South Texas) may have different attitudes toward healthcare compared to areas (i.e North Carolina) where there are very few Hispanics. Future research should focus on the causes of healthcare inequalities, more specifically native status and its effects on the Hispanic community since it is the most underrepresented ethnic group in regards to healthcare coverage. The Hispanic community of the United States is expected to exponentially grow, therefore, healthcare disparities cannot be ignored. Further research is required to improve legislation and enhance the Affordable Care Act's mission. With an increase of knowledge of Hispanics' behavior towards healthcare comes responsibility to acknowledge the needs of Hispanic females and males. "The Affordable Care Act is working to make health-care more accessible." Minorities regardless of their nativity status are taxpayers and deserve to be given equal access to such amenities.

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The Union of Religion and Politics in American History: A Case Study of the Word "God," and US Presidential Inaugural Addresses

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Fifty-seven United States Presidential Inaugural Addresses have been given since George Washington's first inaugural in 1789, to Barack Obama's second in 2013. In that time span, US Presidents have used the word "God," one-hundred and four times. A text analysis will be conducted on all US Presidential Inaugural Addresses, using a change-over-time lens to determine how the use of the word "God," in Presidential speeches has changed throughout American history. The purpose of this research is to investigate a connection between religious terms used in US Presidential speeches and historical events in American history. Traditional historical methods will be used to reconstruct accounts from the past by gathering primary sources, in this case, US Presidential Inaugural Addresses. Other evidence found in previous research conducted in the Political Science field will be used to support the findings in the primary documents. The documents will be analyzed using WordStat, TagCrowd, and Microsoft Word.

Literature Review

Very little is written on the relationship between religion and American politics. Political Scientist seem to avoid the subject, and those that do have something to say, appear to have little in the way of quantitative numbers to support their conclusions.

Kenneth Wald of the University of Florida and Clyde Wilcox of Georgetown University, argue that "the absence of religion from the pages of the *American Political Science Review,* is clear evidence that the field of Political Science has at best marginalized religion as a subject."[i] According to a 2001 survey of 1,400 American political scientist, "the *American Political Science Review* is indeed the agenda setter in the field of Political Science."[ii] Polls were conducted in both Ph.D. and non-Ph.D. granting departments across the US, to ensure the data reflected a diverse group of leaders in the political science field.

Wald and Wilcox state that the lack of articles concerning religion in the *American Political Science Review* is a direct reflection of the overall attitude across the field of Political Science. The authors found that an average of once in every three years an article in the journal would contain a religious term. Using the JSTOR database the authors found only thirty-five articles with a religious term, though Wald and

Wilcox also state that "the religious terms were more descriptive than analytical."[iii]

It may be surprising to most that religion had become a neglected subject in the Political Science field, the authors state, "in the religiously-based political conflict in the US and Muslim world during the 1980's, there was an expectation of greater coverage of religious themes in the field. However from 1980 on, just one article in *American Government* put religious factors at the center of analysis."[iv]

It would also seem that if religion was being neglected in Political Science, then surely it would be neglected by other fields in the social sciences. But there is one field that proves that hypothesis to be wrong. "From 1906 to 2002, the *American Journal of Sociology* and *American Sociological Review* each printed four times the number of articles with a religious theme compared to their political science counterparts."[v] So the problem was not with social sciences as a whole, but in the one field that should be concerned with political theory was neglecting the topic of religion.

There has to be a reason why political science is leaving religion on the backburner. There are several guesses as to why, but the answer is likely too complex for simple answers. One theory suggests, "An antireligious bias has permeated academe in general and political science in particular."[vi] Many conservatives argue that liberals are the majority in the academic world, and polls taken of professors has shown that to be a possibility.

Still Wald and Wilcox believe that one of the key factors of religion being neglected in political science as a whole, is the "modernization" approach in post-World War II comparative politics. A 1967 article by Bernard Crick enforces this theory, stating, "liberal values and the democratic ethos may have deterred academic investigation, and institutional religion was perceived as a constituent element of the democratic order, but as a potential threat that needed to be tamed."[vii]

Beyond disciplinary problems Wald and Wilcox state that social background and the complexity of subject and measurement hindered religion and its prominence in the political science field. More people attended church in the late 1960's then today, while the complexity of the subject makes it hard to measure. Grants funded by the Federal Government were also leery of sponsoring research that focused on religion due to the separation of church and state boundary.

"The sudden emergence of Christian Conservatism as an organized force has surprised many people, and the rise of evangelical Christianity has re-defined some political alliances."[viii] There has been and increased call for intellectual research into the role religion plays in modern American politics. What little interest there is for religion in political science had developed despite facing many obstacles. Wald and Wilcox state that the interest level is unlikely to persist unless specialist in the subject tie their work to broader theories of political behavior and change.

It would be peculiarly improper to omit in this first official act my fervent supplications to that Almighty Being who rules over the universe, who presides in the councils of nations, and whose providential aids can supply every human defect, that His benediction may consecrate to the liberties and happiness of the people of the United States....In tendering this homage to the Great Author of every public and private good, I assure myself that it expresses your sentiments not less than my own…No people can be bound to acknowledge and adore the

Invisible Hand which conducts the affairs of men more than those of the United States. Every step by which they have advanced to the character of an independent nation seems to have been distinguished by some token of providential agency; and in the important revolution just accomplished in the system of their united government the tranquil deliberations and voluntary consent of so many distinct communities from which the event has resulted cannot be compared with the means by which most governments have been established without some return of pious gratitude, along with an humble anticipation of the future blessings which the past seem to presage. These reflections, arising out of the present crisis, have forced themselves too strongly on my mind to be suppressed.[ix]

United States Presidents have long used religion and spirituality as a means of communication with the American people. In George Washington's first inaugural address, he wastes no time in mixing religious thought in his first political speech as President. America is a young nation that just won its freedom from the world's foremost superpower, and America's victory seems nothing short of a divine miracle from Heaven above. George Washington witnessed this divine intervention up close and personal as the Commander and Chief, and upon taking office as America's first President, he makes a statement few Presidents would have the courage to publicly state in modern American politics.

No people can be bound to acknowledge and adore the Invisible Hand which conducts the affairs of

men more than those of the United States.[x]

Can it be that George Washington believed and publicly expressed to the American people, that they owed adoration to the Divine Providence that afforded them the miracle of defeating the British? In a country that prides itself on the separation of church and state, separation of religion and public policy, one of the most notable Founders in American history goes on public record stating that the American people above all other peoples of the world, owe the Invisible Hand adoration and worship.

Religion and politics are two topics that can easily be the source of a heated controversy between the closest of friends. For this simple reason many families do not allow discussion of these subjects at the dinner table by themselves, much less both at the same time. So what happens when when the two subjects are mixed together, and how have the two played out together in American history?

All newly elected US Presidents give an inaugural address before taking office, often setting the tone of the Presidency for the next four years. This address can be used to inspire hope, assurance, healing, and peace in the midst of uncertainty and turmoil among the American people. Regardless of personal belief, US Presidents use religious thought in their speeches. Is religion infiltrating American political speeches, or is American politics becoming more secular in nature? Many Conservatives believe that American politics is becoming far too worldly, while Liberals feel that politicians should be restricted in their use of religion in their speeches.[xi]

Many people are under the assumption that American politics is becoming more secularized in ethos, falling away from the moral compass of Judeo-

Christian ideals. However, using the traditional historic method of examining primary documents, a data analysis will be conducted on the US Presidential Inaugural Addresses through a change over time lens to determine how the use of the word "God," in Presidential speeches has changed throughout American political history. The data will show that political speeches contain more religious terms in modern American politics than ever before in American history.

How does Political Science as a field record the history and understanding of religion in American politics? Many would argue that religion is a neglected subject by political scientist, desiring much needed research in the future. US Presidents constantly play on the heart-strings of Americans, and religion is a tool often used to accomplish this means. Why then would political scientist neglect such a hot topic? Some believe that an antireligious bias has permeated academe in general and political science in particular, seeing religion as a threat that needs to be tamed.[xii] Still others believe that Liberal Democrats outnumber Conservative Republicans in the academic setting, therefore, dictating the focus of research away from religion.[xiii] Regardless, is it not in America's best interest to have educated, informed, and critically thinking voters? Perhaps political scientist are not so concerned with interpreting religious cues found in US Presidential speeches. What about other social science fields? Are historians interested in interpreting the meaning behind religious terms used in American political history? Apparently sociology is interested in religion and the role it plays in American politics. "From 1906 to 2002, the *American Journal of Sociology* and *American Sociological Review* each printed four times the number of articles with a religious theme compared to their political science counterparts."[xiv]

To say that no one in the Political Science field has covered religion and its role in political speeches would be false and unfair. In the course of my own research I have found many articles on the subject. However, many of these articles left much to be desired in the way of sophisticated analysis. What numbers have been published seem outdated, with articles dating back to as late as the 1930's. The lack of research and data creates an opportunity to explore topics never covered before.

George Washington gave the first Presidential Inaugural Address in 1789, while Barack Obama gave the last in 2013. In just over two-hundred and twenty years the word "God," has been spoken one-hundred and four times by US Presidents during their inaugural speeches. It would take forty years of US Presidents to come and go before James Monroe would utter "God," for the first time in a Presidential Inaugural Address.[xv] What does that mean? Why did it take until James Monroe for the name of God to be invoked during a US Presidential speech? James Monroe and the period of time that has become known as "The Era of Good Feelings," are synonymous. The year is 1817, and America is uniting after ending the War of 1812. There is a sense of unity forming in America. James Monroe strived to downplay and party affiliation as his goal was eliminate parties from national politics. Did James Monroe invoke the name of God in his inaugural address to rally a nation that was now setting its sights on expanding and reaching the Pacific Ocean?

So what if the US President invokes the name of God in his speeches, does it really matter? Studies on the influence US Presidents have over the public agenda would say that it does matter. The President's popularity is crucial to their ability to influence public opinion.

Everything a President speaks needs to be a calculated step. The President has control over setting the public agenda, simply by talking about a subject, or not talking about a subject. But if the President has a low approval rating, it does not matter what they say one way or another.[xvi] So does this mean US Presidents might say things to simply gain the ear of the American people? Americans already know the answer to that, they do not even have to have the ability to read a US Presidents lips to know a President will say anything to gain their approval.

Founders and a Redeemer

Many of the first US Presidents never used the word "God" in any of their Presidential speeches, and the personal faith of the early Presidents can fairly be called into question. Deism was a popular movement in that era. Deism was a growing popular belief in the late 18th Century.[xvii] Deist believed in a God over all nature, but not necessarily the divinity of Jesus Christ. More than one Founder has gone on record to state that they believed Jesus was probably the greatest moral teacher of all time, but could not speak with certainty towards the notion that he was a God.

George Washington is one of the recognizable names among US Presidents. Many of his speeches reference a spiritual deity as the "Invisible Hand," "Almighty Being," and "Great Author." Never once did he use the name of God in any of his speeches directly, but when a closer look at his inaugural speech of 1789 is considered, readers must conclude that George Washington held a strong belief in a Divine agent. When one considers what it took for America to win its freedom from the British Crown, it is no stretch to conclude that only a Divine intervention from above could have afforded this nation a victory.

Where some US Presidents have thoughtlessly invoked the name of God in their speeches, George Washington referenced a God of Nature with great thought. One can imagine what George Washington was thinking at his inaugural. Just two years before Washington was encamped at Valley Forge, leading a rag tag Continental Army through the harsh New England winter. When Washington was referencing the Invisible Hand over America's destiny, was he remembering the Small Pox outbreak running through his camp at Valley Forge? Maybe he recalled how poorly equipped, fed, clothed, and trained his band of men were. Yet there he was, speaking to people of a new nation, free and independent of tyranny. Still there is the argument that George Washington refused to kneel at prayer, take communion, and refused a minister on his death bed. This may be attributed to the fact that the popular Deist movement believed that organized religion was corrupt with dogmatic practices. Washington could have very well been a believer in God, while despising organized religion.

Not all Presidents believed in mixing religious thought into political speeches. Thomas Jefferson is the champion among liberal political scientist. Jefferson had little time for talk of miracles and superstitions in the public and political sphere. Jefferson stated that he did not believe in the Divinity of Christ, but only accepted Jesus as a great moral teacher. When compared to his predecessors, George Washington and John Adams, there is a completely different tone in his inaugural address. There are no eloquent adorations for a Divine Providence. As a devout believer in the newly established American government, Jefferson focuses on the strengths of freedom derived from this new system of governing a nation. Still, the author of the infamous Declaration of Independence could not help but make

reference to an Infinite Power that governs the universe, to bestow council on this new nation.

> Relying, then, on the patronage of your good will, I advance with obedience to the work, ready to retire from it whenever you become sensible how much better choice it is in your power to make. And may that Infinite Power which rules the destinies of the universe lead our councils to what is best, and give them a favorable issue for your peace and prosperity.[xviii]

Even the leader among those in thought that religion should have no place in American politics, seemed to feel compelled to mention an Infinite Power in his inaugural address. Did the mentioning of this religious figure originate from Jefferson's own personal belief, or did it come from a need to connect with his constituents? Many scholars would debate the answer to that question, but Liberals are not the only ones to use Jefferson as a champion of their political ideology, Conservatives too embrace Jefferson.[xix]

While the birth of a new free nation was a momentous occasion not only in American history, it was crucial to the history of mankind. Still many scholars would agree that even more important than the birthing of America as a new nation, the re-birth of America during the American Civil War was more important. America would lose nearly three percent of its national population. An estimated 620,000 lives lost in the bloodiest of wars in American history.[xx]

The American Civil War is by far the most tragic event in American history. More lives were lost in the American Civil War than any other war America was involved in. At the center of it all is one of the most regarded statesman in American history, Abraham Lincoln. Extensive research has been done on Lincoln, as he is arguably the most written about human being ever, even outdoing Jesus of Nazareth. Lincoln was not the first President to drag God's name into a political speech or inaugural address. He was, however, the first President to invoke his name more than once in his inaugural address. Could it be that US Presidents use the word "God," to comfort the American people when they feel lost and in despair. Some consider Lincoln's second inaugural speech to be among the greatest of Lincoln's. The American Civil War was winding down, and Confederates were on the ropes, but a weary Lincoln was feeling the strain of all the nation's casualties. Riddled with depression, Lincoln penned one of the greatest inaugural speeches.[xxi] In that address Lincoln uses the word "God" six times. It is worth noting that Lincoln's second inaugural speech is considerably shorter than any other inaugural speech. Only two US Presidents have had shorter inaugural speeches, Franklin Roosevelt, and George Washington. It is no surprise that historians refer to Lincoln as the "Redeemer" President. Remarkable for a man who was more than likely an agnostic or atheist as a young man.

Modern Presidents

If you split the history of US Presidential Inaugural Address in half, the numbers are clear. The second half of Presidents outpaced the first half by a figure of four to one. In the first one hundred and twelve years of American history, US Presidents use the word "God" twenty times. In the last one hundred and twelve years, however, US Presidents use the word "God" eighty-four times. One might argue that innovations in mass media is the cause for the outburst of religious tones being delivered in Presidential speeches.

Ronald Reagan, or the "Great Communicator," had two inaugural speeches. In those two addresses Ronald Reagan has spoken the word "God," more than any other President with a total of thirteen times.[xxii] Reagan was raised by both a Catholic and a Presbyterian, in the end Reagan would follow the Presbyterian path until his death in 2004. During Reagan's administration the US the world was witnessing the decline of the Soviet Union, and America's economy was coming down. Was Reagan trying to corral the American people in these chaotic times?

Articles have been written about George W. Bush and his overuse of religion in his speeches to send America on a "Holy Crusade" against the Middle East.[xxiii] If we look at the just the number of times George W. Bush used the word "God," in his inaugural addresses, that argument seems to lose its validity. George W. Bush only referenced God's name six times total in his two inaugural addresses.[xxiv] Throughout Bush's Presidency he was never afraid to speak about his faith, and how it was a driving factor in his moral compass.

Barack Obama as a President came under fire early in his campaign, many questioning where he stood with his own personal beliefs. If we look at his two inaugural speeches, Obama invoked the name of God a total of ten times,[xxv] coming in only second to Ronald Reagan, and a tie with Richard Nixon. Was Obama's usage of the word "God" an attempt to compensate for the claims that he is truly not a Christian, or is it a part of his own personal beliefs? Because personal faith is as it sounds, personal. Only Barack Obama will ever know for sure. Despite the allegations against his faith, Barack Obama has publicly stated that he is a Christian.

Concession

America is a diverse nation in regards to religion, as there are numerous religions practiced and observed each day in America. Even among the most devout Christian, Muslim, and Jewish faiths, doctrine is constantly a source of internal strife. Religion means different things to different people. Within Christianity alone there are several different denominations, and within those denominations different sects. This diversity makes it difficult to identify what a religious term is, and harder to conduct a fair and balanced analysis of political speeches.

It is fair to say that just because an individual uses religious terms that it doesn't necessarily mean the individual is a believer in that faith. There is very little modern and relevant research on the relationship of religion and its role in American politics, and even far less research articles that contain quantitative numbers to support any arguments. This leaves the door wide open for researchers to explore a virtually untouched subject.

Conclusion

The Presidential Inaugural Addresses are just a brief snapshot of US Presidential history. None of the data mentioned considered State of the Union Addresses, or any other speeches given by Presidents. With the influence American Presidents have over the public opinion in America, it is vital to understand the meaning behind these political addresses, regardless of what political party you are affiliated with. But maybe that is why political science as a field chooses to neglect this topic. Maybe the winning idea in American politics relies on American voters to be under-informed, uneducated, and passive-thinkers. Maybe the American constituent is no more informed than the populous of North Korea. For this reason continued research is needed

in this area. The next step in this research will be conducting an analysis on US Presidential State of the Union Addresses to see if the data found in this research carries over into other Presidential speeches.

The Founders were known for their new enlightened way of approaching religion as a subject with the Deist Movement. Thomas Jefferson in particular was not amused with the notion that monarchs were entitled to rule over people by their supposed God given appointment as kings and queens. Jefferson loved the idea of individual freedom, and the liberty to peruse one's own end in life. Jefferson and others in the Deist Movement despised kings and queens using religion as a way of governing the people. However, is there any connection between the logic of European monarchs using religion to subdue their people, and US Presidents invoking the name of God to calm the swell of their own people?

> Having thus imparted to you my sentiments as they have been awakened by the occasion which brings us together, I shall take my present leave; but not without resorting once more to the benign Parent of the Human Race in humble supplication that, since He has been pleased to favor the American people with opportunities for deliberating in perfect tranquility, and dispositions for deciding with unparalleled unanimity on a form of government for the security of their union and the advancement of their happiness, so His divine blessing may be equally conspicuous in the enlarged views, the temperate consultations, and the wise measures on which the success of this Government must depend.[xxvi]

When looking at the US Presidential Inaugural Addresses as a measure of Presidential political speeches, the numbers indeed suggest that speeches are becoming more heavily saturated with religious terms, and becoming less secular in nature. What does it all mean? That is hard to say at this point, this look at political speeches in American history is only the tip of the iceberg. The only clear conclusion is that more research is needed in the future, so that we may better understand the meaning of religious terms in political speeches, and give attention to a neglected field in political science. Then we can better educate voters, so that they may approach American politics as critical-thinkers.

Appendix A
Charts and Graphs on the Usage of the Word "God"

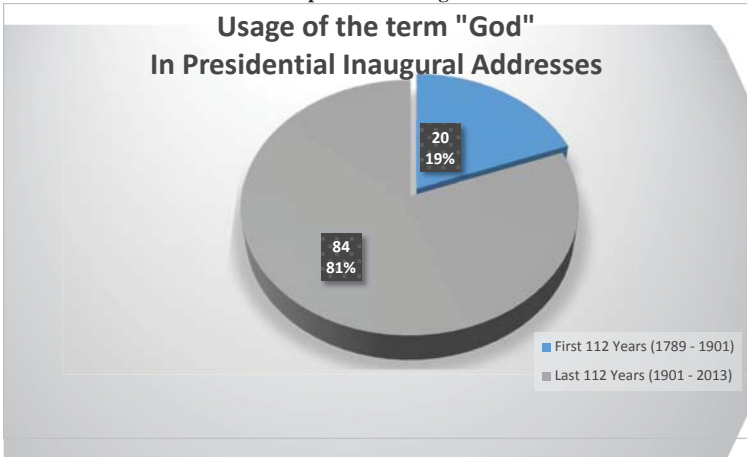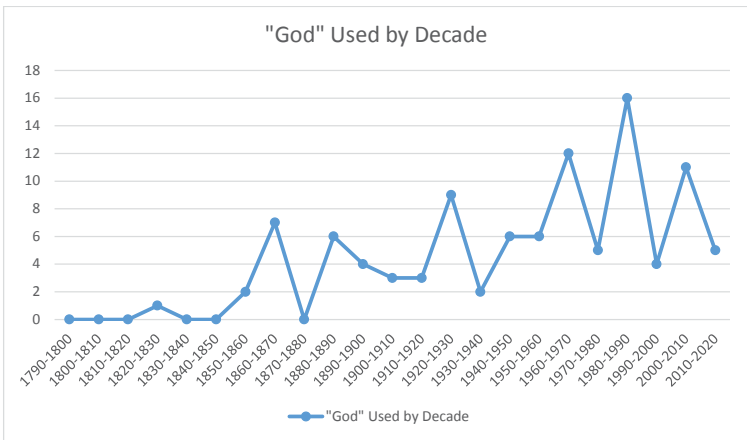Figure 1.1. A pie chart on the usage of the word "God"

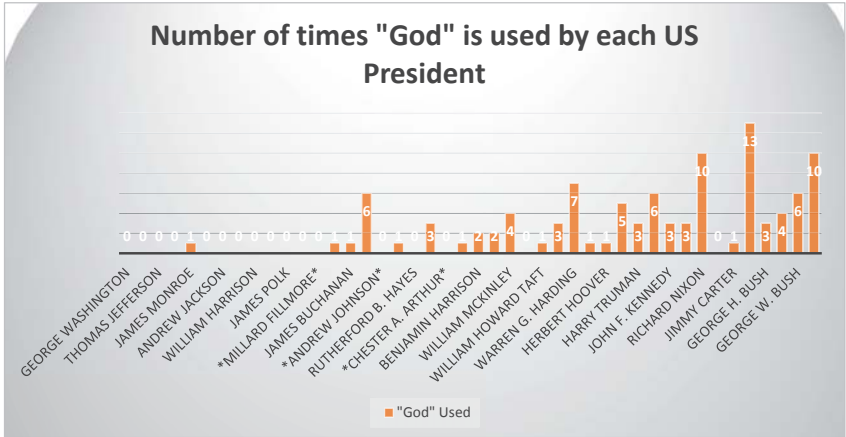Figure 1.2. A line chart breaking down the usage of the word "God" by decade

Figure 1.3. A bar graph depicting the usage of the word "God" by each US President

Appendix B:
Graph of total word count per US President for each Inaugural Address
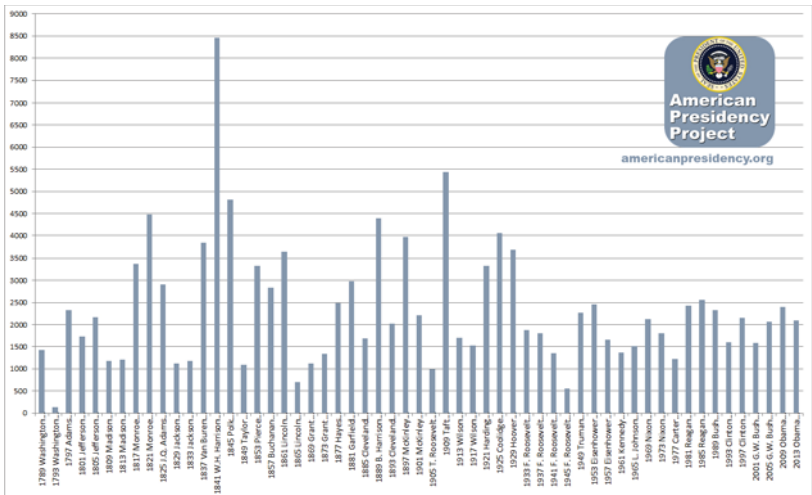

Figure 2.1. Graph depicting total word count per US President in Inaugural Addresses

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Appendix C:
Scriptures Presidents used during Oath of Office

Scriptures US Presidents had the Bible Opened to during Oath of Office	
US President	**Bible Scripture**
Martin Van Buren 1837	Proverbs 3:17
Andrew Johnson 1865	Proverbs 21:1
Ulysses S. Grant 1873	Isaiah 11:1-3
Rutherford B. Hayes 1877	Psalm 118:11-13
James Garfield 1881	Proverbs 21:1
Chester A. Arthur 1881	Psalm 31:1-3
Benjamin Harrison 1889	Psalm 12:1-6
Grover Cleveland 1893	Psalm 91:12-16
William McKinley 1897	2 Chronicles 1:10
William McKinley 1901	Proverbs 16
Theodore Roosevelt 1905	James 1:22-23
William Howard Taft 1909	1 Kings 3:9-11
Woodrow Wilson 1913	Psalm 119
Woodrow Wilson 1917	Psalm 46
Warren G. Harding 1921	Micah 6:8
Calvin Coolidge 1925	John 1
Herbert Hoover 1929	Proverbs 29:18
Franklin D. Roosevelt 1933, 37, 41, 45	1 Corinthians 1:13
Harry S. Truman 1949	Matthew 5:3-11
Dwight D. Eisenhower1953	Psalm 127:1
Dwight D. Eisenhower 1957	Psalm 33:12
Richard Nixon 1973	Isaiah 2:4
Gerald Ford 1974	Proverbs 3:5-6
Jimmy Carter 1977	Micah 6:8
Ronald Reagan 1981, 85	2 Chronicles 7:14
George H. Bush 1989	Matthew 5:3-11
Bill Clinton 1993	Galatians 6:8
Bill Clinton 1997	Isaiah 58:12
George W. Bush 2005	Isaiah 40:31

Figure 3.1 Scriptures US Presidents had the Bible opened to during Oath of Office.

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[iii] Wald, Wilcox, "Getting Religion," 523.

[iv] Ibid., 525

[v] Ibid., 525

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Relationship between Environmental Practices and Financial Performance of Software Companies
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The purpose of this research is to explore the relationships amongst corporate social responsibility (CSR) and financial success measures in the computer software industry. A major aim is to expand current understanding of CSR, so that companies will revise strategies, improve performance, and allocation of resources.

Specifically, this research examines the relationships between Environmental Practices, an aspect of social responsibility, and Accounting Measures of financial success. Correlations are devised between measures of strengths and concerns of publicly traded companies, and their return on assets and return on sales. Measures of environmental strengths are taken from the MSCI ESG STATS (STATS) database. The findings suggest that little to no relationship exists between Environmental Practices and Accounting Measures of success. Few companies have any indication of strengths or concerns in environmental practices. Due to the expansion of cloud computing, an energy-intensive service, it is important to continually investigate the corporate policies of software companies, in order to assure that they maintain their self-espoused "clean" image.

INTRODUCTION

Business for Social Responsibility (BSR) defines corporate social responsibility (CSR) as "achieving commercial success in ways that honor ethical values and respect people, communities, and the natural environment." Though seemingly simple, there is no single definition. CSR is expanded in various ways. McWilliams and Siegel add that corporate social responsibility extends "beyond the interest of the firm and that which is required by law." CSR is more than just following the law [16]. Frooman narrows the definition to only include the actions that a firm takes that "affects an identifiable social

shareholder's welfare" [11]. CSR includes issues related to business ethics, community investment, environmental concerns, governance, human rights, the marketplace, and the workplace itself. CSR is not a new practice. However it is a practice that has been shaping business model development, investment, human resources, marketing, and risk management. With growing social and environmental consciousness, coming from customers, employees, community groups, and governments, investments in companies that have negligible or negative effects on society and the environment are being reconsidered. One example is divestment of companies that fail to properly disclose information on toxic emissions [13]. Due to the fact, that it indicates risk to investors [7]. CSR stands in contrast with views from economist and Noble prizewinner Milton Friedman. Friedman sees that "there is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud" [10]. Though this unbridled libertarian approach views corporate social responsibility as "unadulterated socialism", it is necessary to note that corporations are economic titans. According to the OECD, of the 100 largest global economies, as measured by GDP, 51 of them are US corporations, and only 49 are nation states. Since economic power is shifting, corporations should be addressing environmental and social problems [19]. Stakeholder theory considers a wider spectrum of stakeholders. These include employees, customers, suppliers, and the general community [3].

With so much to consider, CSR scrutinizes various products and activities. Ranging from tobacco and gambling, employee relations and corporate governance. Many studies look at these concerns. This study will regard the environment as a stakeholder. Precisely, looking at the environmental practices and policies of computer software companies.

Software companies were chosen for various reasons. These companies seemingly appear "clean" compared to other industries, namely computer hardware companies. And many of these companies are welcomed as a mainstay of modern and efficient industries. Comparatively, software companies produce little to no electronic waste, which plagues the products and services provided by their hardware counterparts. With increased network connectivity, cloud computing has become extremely popular. Most software companies operate through cloud interfaces. Allowing for prompt service, software updates, and file storage. The server operations that house the cloud are energy intensive. Companies like Google, Apple, and Facebook now run many of their operations with renewable energy [12].

The purpose of this research is to explore the relationships amongst corporate social responsibility (CSR) and financial success measures in the computer software industry. More specifically, the relationship between Environmental Practices, and aspect of social responsibility, and accounting measures of financial success will be examined.

The remainder of this paper will review relevant literature, develop a model, state hypotheses, discuss the collection

of data and methodology used in the study, present the results. Finally, the paper will address limitations of the investigation and recommend future research.

LITERATURE REVIEW

The literature review section first describes research surrounding the environmental practices factor of corporate social responsibility and its direct impact on measures of financial success. We also discuss the relationship between an organization's environmental strengths and concerns and how that affects assets, sales, and stocks, ultimately impacting financial measures.

CSR and Environmental Practices

In research, the existing environmental metrics are performance and risk-related based. Performance is impacted by investments in renewable energy, environmentally friendly products, recycling, pollution prevention, and additional environmental policies. Meanwhile, risk based metrics reflect a firm's environmental impacts on the natural environment (e.g. greenhouse gas emissions (GHG), water, energy, fuel and material consumption, waste). Risk based metrics also takes into account pressure from stakeholders, environmental sanctions, and more demanding standards for environmental protection. These are understood as external consequences. [17]

This paper will use MSCI Environmental, Social, Governance (ESG) STATS (STATS) measures of environmental performance and risk. Formerly known as Kinder, Lydenberg, and Domini (KLD) Research &

Analytics, STATS data shows the ESG ratings of publicly traded companies in annual datasets. In regards to environmental ratings, it is divided into "strengths" and "concerns". Environmental strengths, like performance-based metrics, include beneficial products and services, pollution prevention, recycling, clean energy, management systems, and other strengths. Environmental concerns include regulatory problems, substantial emissions, climate change, negative impact of products and services, land use and biodiversity, non-carbon emissions, and other concerns. The indication of meeting the criteria of a strength and concern is displayed on a spreadsheet, with binary indicator of "1" if the firm does meet the criteria, and "0" if the company does not meet the criteria. The qualitative data from STATS (formerly known as KLD) is frequently used to investigate activities from an internal stakeholder viewpoint. In relation to this research, other investigations, using this dataset, have identified that a better environmental processes score is linked to a higher market valuation of a firm [8]. The dataset was also used in investigating the effect of corporate social responsibility on the cost of equity capital for a large sample of US firms. Their findings indicated that investment in improving responsible employee relations, environmental policies, and product strategies contributed substantially to reducing firms' cost of equity [9].

Measures of Financial Success

Measuring financial performance, though seemingly simple, has specific complications. Many researchers use market performance measures [1] [20],

others use accounting performance measures [21 [6] and some utilize both [15]. The two measures, which represent different perspectives of how to evaluate a firm's financial performance, have different implications. The use of different measures complicates the comparison of the results of different studies.

With this in mind, this research focuses on just one: accounting measures of performance. Particularly, this research will use Return on Assets (ROA) and Return on Sales (ROS) accounting measures. ROA is calculated as net income divided by average total assets, and is important measure of how well a company is using its assets to generate profitability [14].

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

ROS is calculated as net income divided by net sales. This measure represents the number of cents of profit generated by each dollar of sales [18].

$$ROS = \frac{Net\ Income}{Net\ sales}$$

ROA and ROS are common measures of profitability used in the information technology business research [2].

Though, market measures are forward looking and focus on market performance. The stock-market-based measures of performance yield obstacles, for example, the use of market measures suggests that an investor's valuation of firm's performance is a proper performance measure [15]. Accounting measures capture only historical aspects of firm performance

[15]. Although, accounting measures are subject to bias from managerial manipulation and differences in accounting procedures [4][5]. Accounting measures focus on how firms' earnings respond to different managerial policies [13], such as adopting environmental policies.

MODEL DEVELOPMENT

Hypotheses

In this study, the relationship between environmental practices and financial performance is tested. The relationship may be negative, neutral, or positive. The following hypotheses are posited based on accounting measures of profitability:

$H1_1$: A significant positive relationship exists between Environmental strengths and Accounting Measures of success.
$H1_2$: A significant negative relationship exists between Environmental concerns and Accounting Measures of success.

DATA AND METHODOLOGY

In order to test the hypotheses, a study was designed which examines the relationships amongst measures of environmental practices, and accounting measures. The following section describes the data collection process, the variables used in the analysis, and the methodology employed.

Independent, Dependent Variables

This study uses panel data from the computer software industry over the period 199 through 2010. The dataset includes a total of 1217 observations of 260 publicly traded firms. Data from the Center for Research in Security Prices (CRSP) was combined with the Socrates database from STATS.

This study developed two categorical variables by combining the STATS indicator ratings variables for environmental strengths listed as (ENV-str-#), and the STATS indicator ratings variables that reflect concerns listed as (ENV-con-#). The indicator variables from the STATS database collapsed into

environmental strengths are six environmental relation variables: beneficial products and services, pollution prevention, recycling, clean energy, management systems, and other. The seven environmental concern variables include: regulatory problems, substantial emissions, climate change, negative impact of products and services, land use and biodiversity, non-carbon emissions, and other. This collapse transformed the binary entries into continuous variables.

The dependent variables used in the study represent accounting measures of financial success. In particular, ROS and ROA are used to represent financial performance.

Table 1 provides descriptive statistics of the data acquired from the CRDP and STATS.

Methodology

This study involves the investigation of the variables and their relationship. The study ran Pearson linear correlations of the variables on StatsPlus:mac 5.9.

RESULTS OF ANALYSIS

Tables 2 and 3 contain results for the correlations using ROS and ROA as the accounting measures of performance. When ROA was used as the dependent variable the correlation coefficient was -0.02493 when related with environmental concerns, and 0.01458 when related with environmental strengths. Both correlation coefficients indicate that there is little, if any, relationship between environmental

strengths and accounting performance measures.

When ROS was used as the dependent variable the correlation coefficient was 0.00741

When related with environmental strengths, and -0.00416 when related with environmental concerns. Again, both correlation coefficients indicate that there is little, if any, relationship between environmental concerns and accounting performance measures.

LIMITATIONS AND FUTURE RESEARCH

This study had a total of 14 firms that displayed an environmental strength or concern. Out of 260 firms, there is a negligible amount of firms that indicate any environmental strength or concern. New data from 2011 and onwards, might reveal a greater amount of firms demonstrating environmental strengths. For this study, there was no adjustment to account for time. Failing to consider how a environmental policy implementation can lag in having any effect on revenue. Future research will include an adequate adjustment to measure yearly differences.

In addition the independent variables can be expanded and narrowed to see their impact on financial performance. Other dependent variables could be measured, as well.

'

APPENDIX

Table 1. Descriptive Statistics

	Obs*	Mean	Median	Maximum	Minimum	Std. Dev.
ROA	1208	-0.02024	0.04388	0.49951	-12.33095	0.47896
ROS	1208	-0.27123	0.06316	0.96089	-170.88889	5.61218
Environmental Strengths	1217	0.02629	0.E+0	3	0.E+0	0.21681
Environmental Concerns	1217	0.00904	0.E+0	2	0.E+0	0.103

 *Missing data creates difference in the number of observations

Table 2. Correlation Coefficients using ENV-str-# and ROS

Sample size		1208	Critical value (5%)	1.96193

		ENV-str-#	ROS
ENV-str-#	**Pearson Correlation Coefficient**	*1.*	
	R Standard Error		
	t		
	p-value		
	H0 (5%)		
ROS	**Pearson Correlation Coefficient**	*0.00741*	*1.*
	R Standard Error	*0.00083*	
	t	*0.25742*	
	p-value	*0.7969*	
	H0 (5%)	*accepted*	

R

Variable vs. Variable	R
ROS vs. ENV-str-#	0.00741

Table 3. Correlation Coefficients using ENV-con-# and ROS

		Critical value	
ample size		1208 *(5%)*	1.96193

		ENV-con-#	*ROS*
ENV-con-#	**Pearson Correlation Coefficient**	*1.*	
	R Standard Error		
	t		
	p-value		
	H0 (5%)		
ROS	**Pearson Correlation Coefficient**	*-0.00416*	*1.*
	R Standard Error	*0.00083*	
	t	*-0.14431*	
	p-value	*0.88528*	
	H0 (5%)	*accepted*	

R		
Variable vs. Variable	*R*	
ROS vs. ENV-con-#	-0.00416	

Table 4. Correlation Coefficients using ENV-str-# and ROA

		Critical value	
Sample size		1208 *(5%)*	1.96193

		ENV-str-#	*ROA*
ENV-str-#	**Pearson Correlation Coefficient**	*1.*	
	R Standard Error		
	t		
	p-value		
	H0 (5%)		
ROA	**Pearson Correlation Coefficient**	*0.01458*	*1.*
	R Standard Error	*0.00083*	
	t	*0.50655*	
	p-value	*0.61256*	
	H0 (5%)	*accepted*	

R		
Variable vs. Variable	*R*	
ROA vs. ENV-str-#	0.01458	

Table 5. Correlation Coefficients using ENV-con-# and ROA

Sample size		1208	Critical value (5%)	1.96193

		ENV-con-#	ROA
ENV-con-#	**Pearson Correlation Coefficient**	*1.*	
	R Standard Error		
	t		
	p-value		
	H0 (5%)		
ROA	**Pearson Correlation Coefficient**	*-0.02493*	*1.*
	R Standard Error	*0.00083*	
	t	*-0.86587*	
	p-value	*0.38674*	
	H0 (5%)	*accepted*	

R

Variable vs. Variable	R
ROA vs. ENV-con-#	-0.02493

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Order Effect or Metric Invariance? The Stability of CoBRAS Scores When Administered with A Second Measure of Racial Prejudice

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The Color-Blind Racial Attitudes Scale (CoBRAS; Neville, Lilly, Duran, Lee, & Browne, 2000) is the most widely known instrument for measuring the extent to which people emanate from the dominant racial ideology of culture-blaming color-blindness. Because it deals with modern manifestations of prejudice, CoBRAS allows researchers to circumvent problems associated with social desirability bias. CoBRAS also has realized a certain degree of practical importance as counselor educators have become increasingly reliant on its scores when assessing the multicultural competencies of their trainees (Neville, Spanierman, & Doan, 2006; Neville, Awad, Brooks, Flores, & Bluemel, 2013). However, much more needs to be known about its psychometric characteristics if it is to be used properly. For example, it is unclear whether the instrument functions differently when used in conjunction with other measures of racial prejudice. In this study, 166 participants completed both CoBRAS and an alternate measure of racial prejudice—the Attributions for Scholastic Outcomes Scale-Black (ASO-B; Sperling & Vaughan, 2009)—in a randomly assigned order. Results indicated that the three-factor model proposed by the developers did not fit CoBRAS data when all participants comprised a single group (Mean $\chi^2(351)=, 5073.09, p < .001$; CFI= .56; RMSEA= .16; SRMR= .12). More importantly, model fit was statistically worse when factor loadings were constrained to be equal across experimental conditions ($\Delta\chi^2(23) = 1517.06, p < .001$) suggesting that CoBRAS may be influenced by order effects when research respondents are primed about racial issues. Implications for using CoBRAS as a measure of racial prejudice are discussed.

Measurement Invariance of CoBRAS Scores under Risk of Order Effect

Survey data indicate that there is considerably less racial prejudice in the United States today than there was in the 1960s (Bonilla-Silva, 1997; Schuman, Steeh, Bobo, & Krysan, 1997). Although these data out to be inspiring to advocates of social justice, they may represent a more positive understanding of American race relations than what truly exists because people have adjusted their behavior to accommodate changes in social norms that sanction open expressions of racial prejudice (Bonilla-Silva, 2003; Henry & Sears, 2002). In the

past, prejudice was driven by a belief in genetic causes of social stratification, and those beliefs were talked about casually without fear of repercussion. Nowadays, people harbor sentiments that may be equally as antagonistic and hostile, but the way they express their feelings has been tempered to minimize the risk of being labeled racist (Bell, 1992; Bonilla-Silva, 2003b; Delgado, 1996).

The elusive nature of racial prejudice has rendered these constructs far more difficult to measure than in years past (Kinder & Sears, 1981; Kluegel & Smith, 1986; Neville, Lily, Duran, Lee, & Browne, 2006). Researchers can no longer ask participants to use a feeling thermometer to describe their affection for Blacks because they cannot trust that the observed results will mirror reality. Without an empirically sound method of collecting data that are free of social desirability bias (see Fisher, 1993), there is no valid way of tracking changes in racial prejudice over time.

Among the many theories that have been proposed for dealing with this problem, racial ideology theory appears to be the most promising. Racial ideology theory is grounded in the belief that people are motivated to advance the interests of the racial elite while also protecting themselves from being called racist (Bonilla-Silva, 2003a). Neville and colleagues (2000) drew upon this theory when they developed the Color-blind Racism Attitudes Scale (CoBRAS). The instrument has become increasingly popular in empirical research and as a diagnostic tool in counselor education, but it is still fairly new and information on its psychometric properties is still being gathered. In this study, we add to the developing literature on CoBRAS by examining whether scores are influenced by order effects when it is administered in conjunction with other measures of racial prejudice.

Racial Ideology Theory

The term "racial ideology" refers to an organized way of thinking about racial stratification that advances the interest of Whites by blaming stigmatized racial/ethnic minorities for their plight (Bonilla-Silva, Lewis, & Embrick, 2004; Neville & Awad, 2014). The dominant racial ideology in contemporary times is "color-blindness," which refers to a way of perceiving race that ostensibly ignores phenotypic traits as a marker of superiority/inferiority and instead focuses on cultural differences (Lewis, 2004; Lewis, Chesler, & Forman, 2000). As such, people who emanate from a color-blind perspective focus their attention on alleged cultural limitations that prevent Blacks and Latinos from realizing success rather than on their presumed genetic inferiority (Bonilla-Silva, 2002).

Culture-blaming color-blindness is functional as a racial ideology because it distracts attention away from structural features of our economic, political, and educational systems that perpetuate unequal opportunity and rewards by race (Bonilla-Silva & Dietrich, 2011; Bonilla-Silva & Ray, 2008; Burke, 2012). The racial stories spawned by it can also be used to provide concrete accounts of why culture is chiefly responsible for stratification than institutionalized racism (Bonilla-Silva, 2001). In the context of race-based achievement gaps, Latinos and Blacks are thought to be trailing Whites in academic achievement not because the schools systematically deny Latinos and Blacks opportunities, but because Latinos and Blacks do not value education as much as Whites do (Valencia & Black, 2002).

At the interpersonal level, racial stories are functional because they protect the people who tell them from being accused of racism (Bonilla-Silva, 2002). Because the stories are aligned with a broader dominant ideology, there is a built-in assumption that

Blacks and Latinos are culturally inferior, so any rationale that emanates from that assumption is deemed to be "common sense." The speaker does not have to take personal responsibility for pointing out what most people already believe to be true. Furthermore, because the stories exploit beliefs in cultural inferiority rather than genetic inferiority, the speaker can "have it both ways" in the sense that they can denounce "old-fashioned" racists while practicing racial prejudice themselves (Tynes & Markoe, 2010). The familiar preface "I'm not a racist, but…" is characteristic of this tendency (Bonilla-Silva & Forman, 2000).

Previous Research on CoBRAS

Reflecting the principal themes of racial ideology theory, CoBRAS was originally designed to measure the extent to which people adhere to the dominant racial story of culture-blaming color-blindness. Preliminary research conducted by the developers found empirical support for an oblique three-factor model (Neville, Lilly, Duran, Lee, & Browne, 2000). According to their data, "Unawareness of Racial Privilege," "Institutional Discrimination," and "Blatant Racial Issues" were all related to a general factor entitled "Color-blindness. The internal consistency estimates corroborated the results of the exploratory factor analyses performed on the data and provided additional evidence that each of the subscales could stand alone.

Several studies have built on Neville's earlier work by showing that CoBRAS can be used to assess multicultural competence among counselors and other mental health professionals (e.g., Chao, 2013; Loya, 2011; Gushue & Constantine, 2007; Neville, Worthington, & Spanierman, 2001; Penn & Post, 2012). Other research has sought to extend the practical utility of the instrument by demonstrating that CoBRAS can be used to predict attitudes

toward social phenomena (Oh, Choi, Neville, Anderson, & Landrum-Brown, 2010). For example, Awad, Cokley, & Ravitch (2005) showed that scores on CoBRAS were predictive of attitudes toward affirmative action. Similarly, Sperling and Kuhn (in press) found that scores on CoBRAS were related to attitudes toward funding predominately Black schools even after controlling for attributions for the Black-White achievement gap and social dominance orientation.

While these studies have contributed useful information about the properties of CoBRAS scores when administered to various populations, there is much more to be known if CoBRAS is going to actualize its full potential. In particular, remarkably little is known about the impact of administering other conceptually similar indicators of racial prejudice during the same research session as CoBRAS. It is possible that the data produced by CoBRAS could be unduly influenced by the order in which the instruments are taken because research participants are primed to think in certain ways. Currently, no research has examined the extent to which CoBRAS scores are impervious to order effects of this sort.

Hypotheses

We hypothesize that there will be an effect based on order of presentation when CoBRAS is used in a study that includes another measure of racial prejudice. In order to test this hypothesis, we examine whether constraining factor loadings across experimental conditions (i.e., order of instrument presentation) results in worse model fit. This order effect will be more pronounced in CoBRAS scores than in the alternate measure of racial prejudice as evidenced by greater loss of fit when each of the models are constrained relative to when they are free to vary. We further expect that this will negatively affect the predictive

ability of CoBRAS, even when composite scores are used in place of individual items, when used as an indicator of attitudes toward a race-related criterion.

Method

Sample

The present study utilized a sample of 166 participants originally collected by Sperling and Kuhn (in press). According to the authors, most of the participants were drawn from an undergraduate psychology subject pool. These participants were eligible to receive course credit for their participation in the study. Other participants were recruited via snowball sampling and were not promised course credit for participating, although they were able to earn credit if they were students at the sponsoring institution and their instructor agreed.

With respect to demographic characteristics, a majority of participants self-identified as Latino (n= 108; 75.5%) and female (n= 106; 63.9%). When asked about their political orientation, a majority (n= 65; 39.2%) responded that they considered themselves to be "middle of the road" politically. The distribution of responses on the socioeconomic status item was distributed normally, with most participants identifying as "middle class" (n= 73; 44.0%) and fewer responding "working class" (n= 38; 22.9%), "upper middle class" (n= 30; 18.1%), lower class (n= 11; 6.6%), or "upper class" (n= 8; 4.8%).

Instruments

CoBRAS The instrument of primary interest in the study was CoBRAS. It is a 24-item questionnaire that is comprised of three subscales, "Unawareness of Racial Privilege," "Institutional Discrimination," and "Blatant Racial Issues." Cumulatively, the three subscales purport to measure the extent to which a participant endorses the dominant racial ideology of culture-blaming

color-blindness. Participants indicate their attitudes toward several race-related items using a six-point scale ranging from "Strongly Agree to Strongly Disagree."

ASO-B The ASO-B was originally designed to measure how people explain the causes of the Black-White achievement gap. It contains 12 items scored along a five-point Likert-type scale ranging from "Very Unimportant" to "Very Important." Half of the items were designed to measure "culture-blaming" and half were designed to measure "structure-blaming."

ASR-B The ASR-B is a 25-item instrument that aims to measure attitudes toward five different strategies for closing the Black-White achievement gap. For this study, only the "Resource Redistribution" subscale was used. The scale contains five Likert-type items that are intended to measure the extent to which participants agree or disagree with the idea that shifting resources from predominately White schools to predominately Black schools would help to equalize academic outcomes across races.

Procedure

The first step in assessing the effects of priming on CoBRAS scores was to establish baseline estimates using the entire sample without grouping them by experimental condition. Because Sperling and Kuhn (in press) randomly assigned half of their participants to take CoBRAS before the ASO-B and half to take the ASO-B before CoBRAS, it was possible to use their data to establish the baseline comparison points and to perform a validity check on their original analyses.

Next, the *R* statistical package (Version 2.15.3; R Core Team, 2013) was used to generate 250 unique samples of 1000 created through random sampling with replacement from the original 166 participants. Each sample was then subjected to a test of metric invariance using the *MPlus* statistical software (Version 7.2;

Muthén & Muthén, 2014). This approach is consistent with a statistical procedure called "bootstrapping" (see Davidson & Hinkley, 1997). By bootstrapping the data, we were able to capitalize on the central limit theorem to generate a distribution of test statistics that approximated normality. This is important because the chi-square statistic is not normally distributed, which impedes the ability to produce confidence intervals. By bootstrapping we were able to produce a distribution that was symmetrical, thus allowing for meaningful confidence intervals to be set around the observed mean.

An identical procedure was then used to explore for priming effects in the ASO-B scores be comparing model fit loss between models that were unconstrained or constrained by factor loadings and intercepts. As a final step, bootstrapping was used to establish confidence intervals for the fit indices associated with the structural equation model reported in Sperling and Kuhn's (in press) research.

Results

Baseline analyses

In judging goodness of fit, we referred to the guidelines outlined by Bentler and Hu (1999), which suggested that models should have statistically non-significant chi-square values, CFI scores of at least .96, RMSEA scores of less than .08, and SRMR scores of less than .06. An initial analysis of Sperling and Kuhn's (in press) data using the MPlus statistical package (L. Muthén & B. Muthén, 2014) confirmed that the reported results accurately accounted for the underlying relationships in the data. In short, the model they reported had good overall fit ($\chi^2(4) = 15.05$, $p < .005$; CFI = .920, RMSEA = .113; SRMR = .044), and CoBRAS scale scores were predictive of attitudes toward resource redistribution above and beyond what could be accounted

for by the structure-blaming subscale of the ASO-B ($\beta = .521$, $p < .001$).

Sperling and Kuhn (in press) did not present data on the metric portion of their model because they treated CoBRAS data as observed values representing the sum of the response values from each item. Although we could have conducted a confirmatory factor analysis on the 24 items included in CoBRAS as a baseline measure, the estimates would have been unstable given the low ratio of parameters to be estimated and participants in the sample.

Bootstrapping of CoBRAS data

Even though it was unclear whether the original model had good fit, it was still possible to examine order effects by considering relative loss of fit between constrained and unconstrained models. A sample of 250 sets of 1000 randomly selected participants from the original sample of 166 corroborated the original findings, which showed that a three-factor model did not appear to be a tenable representation of the data ($5084.25 < \chi^2 < 5061.93$). There was also a statistically significant loss of fit when the factor loadings were constrained to be equal in the two conditions. Evidence supporting this interpretation came from an examination of the confidence interval set about the mean of the observed chi-square. Theoretically, the chi-square value would not be statistically significantly different in the constrained and unconstrained models if the factor loadings were the same for both groups. In this case, the mean chi-square change value at the 95 percent confidence interval ($1538.57 < \Delta\chi^2 < 1495.54$) revealed a loss of fit between models. That the 95 percent confidence interval did not include the critical chi-square value for a test with 23 degrees of freedom provided an even more substantive basis for the interpretation.

As a point of comparison, the same analytic strategy was applied to responses to

the ASO-B, first using all of the original data, and then bootstrapping from that sample to produce confidence intervals. The results indicated that the ASO-B two-factor model provided much better fit than CoBRAS ($\chi^2(55) = 920.39$; CFI = .86, RMSEA = .13; SRMR = .14) although it still was not within the range of what is ordinarily considered good fit (see Figure 2). In addition, the 95 percent confidence interval also did not include the critical value at 14 degrees of freedom ($180.40 < \Delta\chi^2 < 185.53$) when scores from the two conditions were analyzed in a test of model invariance, however it was much lower than CoBRAS suggesting that while the ASO-B model did not have good fit overall, it did not suffer from order effects to the same magnitude as the CoBRAS data did.

Bootstrapping of the full model

As a final step, a model predicting attitudes toward resource redistribution was specified to mirror the relationships proposed by Sperling and Kuhn (in press). The model included observed variables for CoBRAS loading on a single latent "color-blindness" factor, which was set to predict attitudes toward resource redistribution with the structure-blaming subscale of the ASO-B serving as a lone mediator (see Figure 3). Results of the bootstrapped analysis indicated no loss of model fit based on the confidence interval criterion ($39.56 < \Delta\chi^2 < 41.44$) with eight degrees of freedom.

Discussion

Researchers have long struggled to identify valid means by which to measure racial prejudice. Grounded in racial ideology theory, CoBRAS represents a promising means of accomplishing this task. However, the results of the current study do not provide unilateral support for its use, particularly when multiple measures of racial prejudice are being administered concurrently. In an absolute sense, the three-factor model proposed by Neville and her

colleagues (2000) did not provide adequate fit for the observed data. This problem was compounded by an additional loss in fit when the factor loadings were constrained to be equal across experimental groups.

CoBRAS did not fare much better in a relative sense either as the alternate measure of racial prejudice, the ASO-B, appeared to outperform it. Although traditional indicators of model fit suggested that the ASO-B's purported two-factor conceptualization was not ideal for describing sample data, in comparison to CoBRAS, it performed adequately. The ASO-B also performed better in a test of invariance suggesting that it may be less susceptible to order effects than CoBRAS.

It should be noted, however, that the full model as specified in Sperling and Kuhn's (in press) research appeared was not compromised when constraints were added, which suggests that CoBRAS can still be effectively used to measure racial prejudice, even if the items do not realistically load on their parent factors. Additional research that explores the underlying dimensions of CoBRAS would be useful in order to achieve a more comprehensive understanding of how the items relate to one another and whether it might be more useful to think of CoBRAS scores in terms of a single general factor, or whether the items are more correctly thought of as representing factors other than the ones proposed by the developers.

Likewise, additional research could evaluate whether CoBRAS could be reduced to a "short form." In its present form, CoBRAS includes 24 items, which makes it a fairly labor intensive task for participants if it is administered alongside other instruments. Given the poor performance of the instrument as a whole when subjected to confirmatory factor analysis, eliminating weak items may actually increase the factorial validity of the instrument while not

appreciably reducing its reliability. A statistical exploration of this possibility was beyond the scope of this study, but research along those lines would provide important information for researchers who oftentimes face the dilemma of gathering as much information as possible from participants while keeping the amount of work they are asking to a minimum.

A responsible interpretation of the results would also take into consideration the nuances of the sample. Whereas the original study reported by Neville and colleagues (2000) consisted primarily of White participants, most of the participants in this study self-identified as Latino/a. It is reasonable to believe that respondents of different races and ethnicities may have reacted differently to the items given their different placements in the racial hierarchy and the learning experiences that typically accrue to those who share a racial/cultural experience. Tests of model invariance similar to the procedure used in this study could be used to detect latent mean differences, as well as relative item functioning by group.

Although the results of this experiment did not provide unequivocally positive news about the psychometric viability of CoBRAS, researchers and practitioners are not advised to dismiss the instrument altogether. Instead, it is imperative that additional research be conducted so that test users can have a better understanding of when and how to administer it to obtain the most valid and informative results. The dearth of quality instruments that account for the changing nature of racial prejudice demands that we take a deliberate approach toward developing the best possible means for tracking prejudice at the individual level.

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Figure 1 *Chi Square Frequencies under Constrained Conditions, CoBRAS*
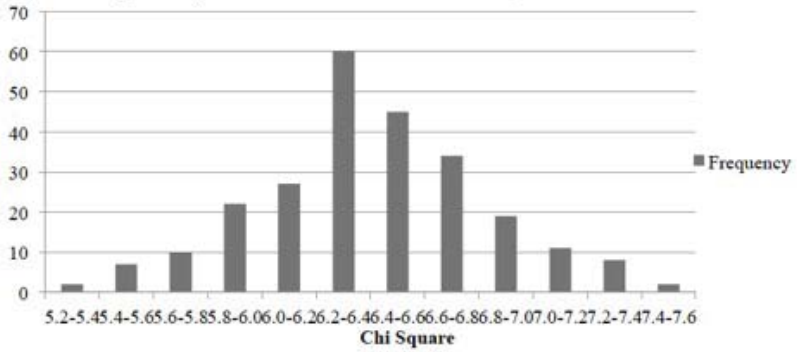
*Chi square values divided by 1,000
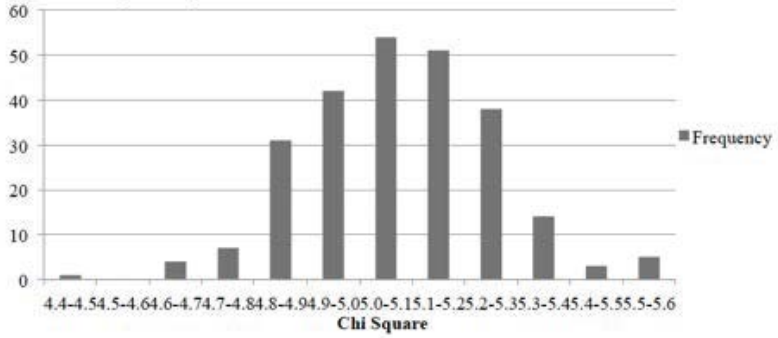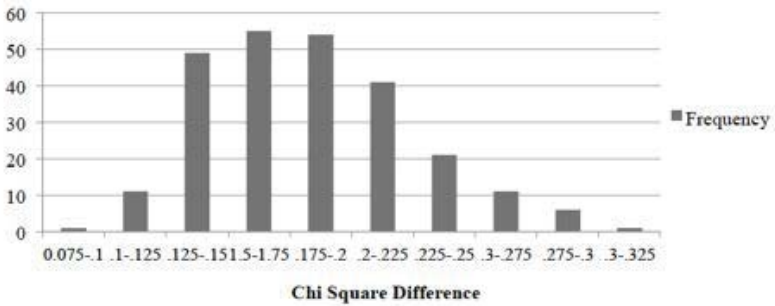
Figure 2 *Chi Square Frequencies under Unconstrained Conditions CoBRAS*
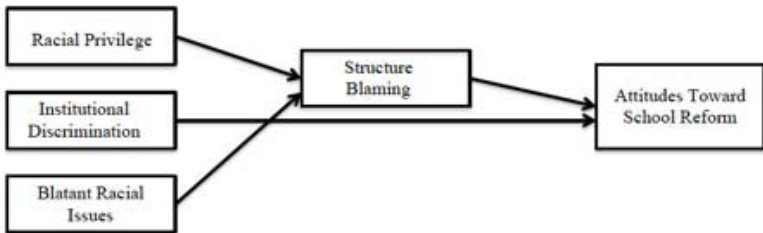

*Chi square values divided by 1,000

Figure 3 *Chi Square Difference Frequencies ASO-B*

Chi Square Difference

*Chi square values divided by 1,000

Figure 4
Original Path Diagram as reported by Sperling & Kuhn (in press)

The Examination of Gustavo Gutiérrez's Claim of the Reoccurring Theme of Liberation in *Gaudium et Spes, Populorum Progressio*, Medellín Conference and the Puebla Conference

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In 1962, Vatican II council brought to attention the need of the modernization of the Church and the revision on the role of the Church (Trisco & Komonchak, 411). During this period of change in the Church, the movement of liberation from poverty and oppression also arose in Latin America. ("liberation theology"). Liberation theology was created out of the movement of the struggle to protest the injustices and the violence that affected in Latin American. In the 1960s majority of Latin Americans were oppressed and suffering from starvation, living in absolute poverty, no reach to basic medical care, the lack of education, and other necessities of life (Boff & Boff 2-3, Sigmund 8). The Catholic Church had a unique position in the issues occurring because the majority of the poor and exploited in Latin America are Christians (Gutiérrez xiv).

The idea of an active Church in the liberation of the people from injustices appeared in the midst of the liberation movement in Latin America. The influence of the Church on the people was recognized by many Catholic clergy and laypeople. Many decided to take matters in their own hands to help the poor in local parishes. Of those who wanted to help was Gustavo Gutiérrez a Dominican Catholic priest from Peru wrote *A Theology of Liberation*. In this book, Gutiérrez introduces a new theology that interprets Christian faith out of the experience of the poor and names it liberation theology (Berryman 4). Even though many wrote and were influential in the development of liberation theology, Gutiérrez is considered the "father of liberation theology" ("Gustavo Gutiérrez").

According to Gustavo Gutiérrez, liberation theology is the understanding of faith of the poor and oppressed, who are believers of God. This type of theology of liberation requires a different procedure than previously conducted in the Church. Gutiérrez explains first there must be an investigation on historical events and theological reflection comes later (Gutiérrez 7-9). It is through the appearance of faith that it takes place in human action, in history that can liberation theologians understand people's relationship with God (Gutiérrez 7). God speaks through the poor, or in other words, humans meet God in history "when faith confront[s] the injustice done to the poor" (Boff & Boff 3). The group who are considered poor or "popular classes" are those who are exploited through capitalist system, rural workers, and the unemployed

waiting for the next available job in the market (Boff & Boff 4). These groups are often compared to the suffering Christ on the cross by liberation theologians. Important key ideas of this theology are solidarity with the poor and the image of the suffering servant, Jesus Christ, in the poor (Boff & Boff 4). Unlike previous years in which the Roman Catholic Church only criticized injustices, liberation theology believes in an active role by the church to stop the oppression of the poor (Boff & Boff 7-8). The idea of liberation appears when oppression and poverty restrict a person's choices and in return affects not only in a materialistic manner but also the inner self (Boff 8-9).

This research paper's purpose is to investigate Gustavo Gutiérrez's claim that the theme of liberation reoccurs in several Roman Catholic Church documents and that this theme develops over time. The theme begins as a concern for economic "development" but later becomes a call for liberation. This paper will concentrate on the themes of poverty, oppression, and development in four sets of Church documents of the Catholic Church: Gaudium et Spes (GS), Populorum Progressio (PP), the documents of the synods of Medellín and Puebla.

Gaudium et Spes, a pastoral constitution written by the Vatican council II, discusses the role the Roman Catholic Church has with the modern world, which involves the relationship between faith and daily life (Curran 11). *Populorum Progressio*, an encyclical written by Pope Paul VI, emphasizes the importance of inner growth (spiritual and faith) and social justice in the development of countries in economy and governments (Curran 11). The Medellín documents were the product of the second Latin American Bishop's Conference (CELAM) in Medellín, Colombia in 1968 (Berryman 22).The Puebla document is the

continuation of the Medellín documents and is the conclusion document of the 1979 third Latin American Bishop's Conference (CELAM) in Puebla, Mexico (Berryman 43).

The documents used by Gustavo are all written after the Vatican II council (1962-1965), between the 1960s and 1990s. During this period, several revolutionary events were happing in Latin America that helped to lead the Roman Catholic Church to address the issues of development and liberation. The documents are products of the concern that the Church had towards dealing with injustices faced by Christians living in Latin America. Patterns within these documents on the view of poverty, oppression, and development are to be noted in this research paper. The words poverty, oppression, development will be defined on the terms of each document and eventually compared to Gustavo's understanding that these concepts eventually lead to the use of the concept of liberation.

Once the information on the four Church documents is collected, this paper will then concentrate on Gutiérrez's logic in using these documents to make his claim of the existence of the reoccurring theme of liberation appearing in all of the four documents.

To start the analysis the general meaning of the term poverty and oppression in the general sense in liberation must be understood. Each church document tries to clarify the previous documents definitions and views on the Church's standpoint in poverty. The concept of the poor in liberation theology is influenced by the Marxist idea of the infrastructure and superstructure of oppression (Boff & Boff 27-230). Both oppressions affect each other if one changes. The superstructure of oppression is the part of the environment that a culture creates that reinforces the power of the elite and wealthy.

Infrastructural oppression is composed of the people who are not conscious of the superstructure oppression but help it to maintain a system were few have power. In this ideology the "socioeconomically poor" or "class oppressed" are the "infrastructural expression of the process of oppression (Boff & Boff 29).

According to Leonardo and Clodovis Boff, liberation theology categorizes three views of poverty: empirical, functional, and dialectical (26-27). The empirical view sees poverty as a vice. The poor are to be treated as objects of pity. The causes of poverty are characterized as laziness, ignorance, or human wickedness, and aid is the solution to this problem. Aid, is the soulution to these problems. The elimination of poverty in the empirical sense is through "almsgiving on individual basis" or to "worldwide schemes" (Boff & Boff 26). The functional view of poverty is that it's a product of "economic and social backwardness" (Boff & Boff 26). Reform is "the progressive betterment of the existing system" that becomes the answer to eliminate poverty in the functionalist's point of view (Boff & Boff 26). Functionalists believe that once "progress" reaches the poor the issues they suffer will disappear as part of a phase of growth and development (Boff & Boff 26). The poor are seen as passive objects waiting for the action of others (Boff & Boff 26). Finally, the dialectical explanation of poverty sees it as oppression and does not perceive it as a temporary thing (Boff & Boff 26). The dialectical solution to poverty is a radical change that involves replacing the current system with a new one (Boff & Boff 26).

The different explainations of poverty have a great impact on the solutions that are constructed to eliminate poverty. Distinguishing between the views on poverty plays an important role when analyzing the four Church documents described.

The Church and Poverty

The earlsiet document to be discussed, *Gaudium et Spes,* indentifies causes that increase the gap between the quality of living of developed and developing countries (63). Economic gain as the ultimate goal is one the conrtributers of the widening gap between the quality of life. By making profit the main goal the devaluation of a person becomes a risk for humans become the means of an end. (63). Another cause is the high dependence the poor have on the small group of rich individuals who possess wealth and power. At this point, the poor have become accostomed to the system where the few end up with all the riches because of the way "the methods of production and the exchange of good and services" are structured (63) According to GS, "economically advanced areas, seem[s], as it were, to be ruled by economics" (63). Economic gain as the ends, or purpose, of economics changes the mindset at the social and personal levels. The devaluation of a person leads to the oppression of the poor.

Economic gain is not the only contributor to this increase of inequality. This mentality caused by the priority of economic gain and the perception of the low worth of the poor causes tension between different social classes (63). The tension between social classes has created bitterness. This response can be better understood when a small group of people live in luxury while "an immense number of people" do not even have access to "absolute necessities of life" (63). In some cases, "Extravagance and wretchedness exist side by side" and can be compared to the differences between developed countries with developing countries that exist next to each other (63). The developed country can be seen as the high social class that lives in luxury at the cost of the developing country. The poor

who work and live in horrible conditions represent the developing countries (63).

This extreme inequality has caused an imbalance not only in the social aspect of life but also in the economic aspect. Workers are seen with less dignity, and the privileged turn a blind eye to where their comfort has cost others. GS calls for "reforms in the socioeconomic realms and a change of mentality and attitude of all" who are part of the system (63). The council suggests aid be given to the farmers to help them with growing and marketing their produce so the consequence of inequality would not be as burdensome (66).

Populorum Progressio, written after *Gaudium et Spes*, advocates forsolidarity as a Christian obligation to help relieve the issue of poverty around the world (17). Two groups of poor are mentioned, the material and moral poor, both of which must be helped. It is around this belief that Pope Paul VI states, "Thus at least the wealthy will know that the poor stand outside their doors waiting to receive some leftovers from their banquets" (83). This quote reveals the mentality in which PP is structures itself and where the roles of the poor and rich are established.

The view of the wealthy as their brother's keeper influences the process in which solidarity is to be reached. Not only do the wealthy have an obligation, as Christian, to aid the poor, but it is because of the abuse brought by the wealthy economic class that many of these issues of poverty and oppression have come about. Writing to the wealth PP, states:

> You have been appropriating things that are meant to be for the common use of everyone. The earth belongs to everyone, not the rich. These words indicate that the right to private property is not absolute and unconditional. No one may appropriate surplus goods solely for

his own private use when others lack the bare necessities of life.(23) This relationship of both poor and rich is regularly brought up to emphasize the existence of the negative impact the structure of the socioeconmic hierachy have caused in society.

According to PP, the poor are not only the material poor, "those who lack the bare necessities," but also, the population who is subjected to oppression (21). Pope Paul VI also connects the material poor with the "exploitation of the worker or unjust transactions" who are also the oppressed due to the inhuman treatment brought about by greed (21). At this point, the role of the owners of wealth play a role in the matter of the oppression and poverty because of "the abuse of ownership or the improper exercise of power" (21).The call for change and aid is not only to the material poor but also to the working population who is oppressed (21).

The goal of the Christian solidarity between all socioeconomic classes is the elimination of social ills, to become aware of the dignity of the men, to live as God wanted with "faith -- god's gift to men of good will – and our loving unity with Christ" (21). Social ills are the inequality between socioeconomic classes. The dignity of men is the goal of everyone living in an acceptable human life with all minimum necessities for life. According to Pope Paul VI, by aiding the poor with these issues all people will be able to see the highest human values and God himself which can bring people closer to "their author and end" (23). In this case, the ones with power and plentitude are to take action because they have resources to do so unlike the poor and oppressed.

The conference of the Latin American Bishops that met at Medellín, Colombia produced *Justice in the World* (hereafter referenced as Medellín). This

document sought to aid the process of transformation for the people in Latin America by examining their unique situation (35-36). This examination by the Latin American Bishops emphasized attention towards the most affected population of social injustices and inhuman wretchedness, the poor and oppressed (188). There is an emphasis on the action through love and a positive view on the effects of poverty (19-20).

Even though taking action is recommended, Medellín shows hints of seeing poverty and oppression as part of the process of progress where, poverty is one of the phases it must overcome (36). Philip Berryman states that this is "because the bishops feared they would be interpreted as endorsing violence (24). The injustices that lead to oppression are seen as signs that have become "indications of the painful birth of a new civilization" (35). Medellín uses the analogy of the oppressed as people who are waiting to receive the fruits of the Spirit to be set free as people in developed countries have been (36). This "new epoch in the history" of Latin America was compared to the exodus where, God's frees his people from oppression (6). The oppressed wait impatiently for the day they become free from their oppressors (36).

According to the Medellín documents, "selfishness, administrative calculations detached from the context of religious and charitable ends, avarice, the anxiety to possessions as an end in itself, superfluous wealth" can be avoided through poverty (19-20). Thus, poverty is seen both positively and negatively (19-20, 188). Three types of poverty are noted: material poverty, spiritual poverty, and poverty of commitment (189). The material poor are those who lack the bare necessities of life, and "spiritual poverty is the attitude of opening up to God, the ready disposition of

one who hopes for everything from the Lord" (189).

The third form of poverty, that of commitment, is positive and has been seen in the clergy who try to have a better understanding of the material poor. The role of priests and their commitment to the faithful of their community has emphasized evangelical poverty within clergy (189). This is the decision to choose to live as the poor in communities who "struggle between anguish and uncertainty" (189). The importance of understanding the realities the poor live in has been seen as the imitation of Christ's decision out of love to become poor himself through the Incranation (189-190).

The concluding document of the Puebla Conference, known as CELAM III (hereafter cited as Puebla), perceives poverty "not a[s] [a] passing phase" but as the "product of economic, social, and political situations and structures" (128). In other words, poverty is ingrained in the very existence of the current socioeconomic and political structures. This document uses Jesus Christ as an example in every poor person's face, the features of the suffering Christ the Lord should be seen and should give a sense of a challenge to the individual who recognizes the suffering (128).

The poor are people who are "caught in a situation of internal and external dependence, and subjected to systems of commercialization that exploit them" (305). They are the marginalized, the outcasts of society, the ignorant who "lack of opportunity to obtain training and work", the indigenous peoples and Afro-Americans, the peasants, the exploited, the laborers, those who lack material goods, and the old who cannot work anymore (305-306). Puebla also connects employers and governments with the restriction of laberors by obstructing the creation of labor unions, the lack of respect for human dignity, and the adoption of "repressive measures" on

workers (129). The restrictions on workers have a double standard because employers do not follow the restrictions they enforce on their employees (129).

According to Puebla, the message and person of Jesus Christ require the dignity of every person be recognize and protected (167). This document reminds people in Latin American that dignity "belongs to all without distinction" making the socioeconomic status an obstruction on matters of human dignity (167). Human dignity is the worth and value humans have because all people were created in the image of God (129).

Poverty and oppression have a nature of lacking of something necessary for life and dignity. Poverty is an obstruction to the full potentiality of a person because it restricts the options of an individual and forces them to live less than human conditions. Evangelical poverty is not to be grouped with the detrimental meanings of poverty.

From Development to Oppression

According to Coatsworth, economics uses the notion of development to refer to the positive change of two aspects of human life, the increase in "human productivity and ... [the] improvements in physical and psychological well-being or welfare" (11). This definition will be kept in mind when analyzing the views on development of all four Church document. Economists measure human productivity by "estimat[ing] the output of goods and services" and dividing them "by the total population of the relevant area" (11). Human productivity is measured as a regional, national, or at a global level. An example of human productivity at a national scale would be called the gross domestic product (GDP) (11). The productivity of an area has proven throughout history such as, according to Coatsworth, during the Industrial Revolution, as a non-reliable measurement

for reflecting an area's population's physical and psychological well-being and welfare (11). During the industrialization of a country, the productivity of a country is high, but the level of poverty in that country tends to rise. It is difficult to measure the psychological well-being of. So, "Economists generally assume that people who are materially better off are likely to enjoy life more" (11). Physical well-being is measurable, and it includes the "life expectancy, average height or body mass or poverty rates" (11).

GS says that a "new stage of history" has started due to the rise of globalization (4). GS is the examination of the "signs of the times" by the Church (4). The theme of globalization appears in GS as the new growing condition in the modern world. Globalization is a "spiritual agitation and the changing conditions of life" caused by the human advances based on secular ideologies (5). The conditions involve a growing awareness of man's dignity of others around the world and of oneself reflecting one destiny for all humanity (5). This consciousness has created "a movement toward [a] more mature and personal exercise of liberty" that calls into question values (6-7). Globalization "increase[d] in the number of men and women who are conscious that they themselves are the authors and the artisans of the culture of their community," and this change in the world, "we are witnesses of the birth of a new humanism" that increases "the sense of autonomy as well as of responsibility" (55). The new sense of responsibility and autonomy brings up the importance of solidarity because to GS development depends on the brotherly aid given by the authority figures, which is human and economic solidarity (85). These never before seen phenomenon in the modern world leads to the phrase "new stage of history" (4).

This new stage of history has brought the Catholic Church's attention to several issues and injustices in the New World specifically, Catholics living in Latin American countries. GS starts with the description of the contemporary situation in Latin America and the new globalizing of the world to help build up the important aspects of development. This document gives an emphasis on the economic aspect of the development. "The development of a nation depends on human and financial aids" which involve the assistance by those who have resources (85). Importantly, GS advocates a peaceful approach, reform, to achieve right conditions for development in developing countries.

According to GS, economic development not only involves "a kind of mechanical course of the economic activity of individuals" but also a human aspect (85). Human labor that is part of the economic aspect of development "for the most part implies the associated work of human beings" (67). The human side of development is the importance of people's dignity (26). Dignity should be above all other things and is a necessity if an individual is to life a truly human life (26). GS firmly agrees that development should be of service of "man" (64). The word "man" here implies every human being of any social status, every race, and nationality (64)

Examining GS in terms of the definition of poverty given by liberation theology, it appears that the poor's role in development is less active, or they are expected to wait for others. The functionalist perception of the poverty as permanent and the poor as the objects action done on affected the Church's view on how to deal with the injustices in Latin America. This interdependence with others has made the issues in Latin American not only a regional problem but also a global socioeconomic problem (26). The Church teaches that earthly goods are to be shared with the poor (69). The few with authority and resources are expected to aid the less fortunate and balance the distribution of wealth more justly (70).

GS expresses the need of aid aimed towards the poor and their displeasure of current imbalance of the distribution wealth and other injustices of current governments of Latin American nations. GS does not believe that a few groups or individuals of one country should be the only ones to judge economic development (65). One perspective in solving the issues in a country will not do much. Section 65 asks for efforts of different groups and public authorities for the shared responsibility of economic development and in an international level different nations are to be involved. In section 75, GS states that Christians "are to demonstrate concretely how authority can compatible with freedom, personal initiative with the solidarity of the whole social organism, and the advantages of unity with fruitful diversity." In other words, the poor and oppressed must work and cooperate with the current system that rules. It also states that "Citizens must cultivate a generous and loyal spirit of patriotism, but without being narrow-minded" (75).

The view of GS on the oppressed affected the amount of attention on their participation at the beginning of the process of reaching development. The oppressed "live under such personal servitude" that restricts the level of action they can take on behalf of their current situation that GS believes that reform is the only way to enable to aid the poor (71). GS believes that reforms are necessary because "income may grow, working conditions should be improved, security in employment increased, and an incentive to working on one's own initiative given" (71). This document believes that the current condition

is a "lack of economic and social balance" and a consequence of the rise of globalization (63). It believes in reform and cooperation with authority.

In *Populorum Progressio*, there is an emphasis on the action on the part of the rich or the oppressor to change current ways of doing thins that have caused inhuman conditions to a large population. The poor and oppressed are to receive aid from the rich and this will enable the poor and oppress to take action for themselves (30-31).

To enable the poor to be liberated from injustices, *Populorum Progressio* sets authentic development as the goal of Christians and all nations around the world (20). There must be truly human conditions to reach development (21). Authentic development, also, incorporates two aspects of human life, the exterior needs and the inner self (21). *Populorum Progressio* in detail mentions the flaws of the economic structures that exist in Latin America. Populorum Progressio gives different socioeconomic groups different roles to create suitable conditions for authentic development.

Authentic development is the "transition from less than human conditions to truly human ones" (20). For development to be considered authentic "it must be well rounded; it must foster the development of each man and the whole man" (14). The Latin America's issue is that there are many people who are lacking bare necessities of life and have restricted choices in life (21). The practices of exploitating workers are the products of oppressive political structures (21). Truly human conditions includes the elimination of social ills, expanding a person's life choice options, having access to life's necessities, awareness of people's dignity and desire for peace (21). The human conditions mentioned by *Populorum Progressio* involve two important aspects of

a man's life that overlap each other, the exterior needs, and spiritual needs.

The exterior needs include the political and material conditions while, the inner self involves the improvement of "man's spiritual and moral development" (*Populorum Progressio* 76). Economics is "to be in the service of man" so the value of men does not become a means of an end that, is one of the dangers of work (26 & 28). Work is an important concept for development because it can either help or economically worsen the morality of workers (27-28). On one hand, it is also through work that life's necessities are obtained (18). On the other hand, money influences the presence of selfishness because its impact on power and pleasure of men (28). Greed and materialism are temptations to all humans and prevents moral development (19 & 41). The inner self involves the soul and God's gift to humankind, faith, and morality (21). For these reasons "social and economic structures and processes" must "accord with man's nature and activity" to achieve complete authentic development (6).

Populorum Progressio continues to think of poverty in functionalist terms. It breaks down two economic structures that have a high impact in Latin America. The two economic concepts mentioned are industrialization and capitalism (25-26). Pope Paul VI views industrialization as a "sign of development and a spur to it" while capitalism as the cause of "hardships, unjust practices, and fratricidal conflicts" (25-26). Capitalism incentive for economic progress is profit and involves the usage of private ownership and social obligations (26).

Even though Populorum Progressio criticizes the economic structure, the socioeconomic structure that exists is accepted and even molded into the plan of achieving development. In section 81 of *Populorum Progressio*, the word

"hierarchy" is used to describe the authority figure and are given the roles of interpreting and applying laws. In the other hand, the laity must convince the authority figures to "infuse a Christian spirit into people's mental outlook and daily behavior, into the laws and structures of the civil community" (81).

The task of eliminating oppression and poverty in Latin America requires the involvement of every nation and socioeconomic class (48 & 80). This wider inclusion of people a change from *Gaudium et Spes* who concentrated on the individual persons, groups, and public authority within the Latin American country (65). In section 35, PP confirms that the lack of education must be dealt with because "economic growth is dependent on social progress." In section 7, *Populorum Progressio* connects the responsibility developed nations have on the imbalance caused by the effects of colonization. Colonized people had to work for the interests of the colonizing country and not their interests (7). The decolonization of these nations caused an imbalance in the economy because many of their work had the purpose of producing goods for one country and now are exposed to a competitive market (7-8).

The wealthy are to participate in solidarity that involves the sharing of land that is not in use or not used wisely (24). The private use of poverty is an "exclusive pursuit of personal gain" that "bring[s] hardships to peoples or are detrimental to the interests of the country" (24). Pope Paul VI agrees on expropriate private poverty that may be obstructing the prosperity of people (24). Even though the expropriation of private land sounds forceful against the rich it only when the property affects the oppressed. The rich are expected to be generous and make a sacrifice for their brethren (47). Developed countries are also expected to aid developing countries.

In section 12 and 13, *Populorum Progressio* states that the role of the church is to encourage development while trying not to get politically involved. Examples of promoting development include the "construction of hospitals, sanitariums, schools and universities" and teaching the natives how to fend for themselves from their available resources (12). The Church also "pioneered in promoting the country's material and cultural progress" (12). The cries of the oppressed are heard by the Church and brought to attention to the world through the Church (3).

In section 64 and 87, *Populorum Progressio* uses the words "hope," "beseech" and "plea." The words are used in this document to give off a message of suggestion. The Church in *Populorum Progressio* is not willing to use more authoritative or confrontational language for the freedom of the poor and oppressed.

The Medellín documents respond to GS and PP on development, action, and the individuals or groups affected in Latin America. These documents are meant to crystallize the reality of the problems that are dealt with and show the rest of the world the level suffering occurring in Latin America (CELAM 4-5). The Medellín document introduced a new procedure to perceive the injustices in Latin American. It starts with the observation on the situation in society then it creates theological reflections (Berryman 23). Medellín "terminologies of development and liberation [are] intertwined" starting the slow replacement of development with liberation (Berryman 24).

In the section of justice in the Medellín documents, the problems of Latin America are listed and separated depending on the sector of the community they affect (CELAM 40-41). The whole text's structure depends on these areas. The segments become the topics of the conclusive

document. There are two types "the more secular topics (justice, peace, education, family, youth)" and "the more church-related ones (pastoral work, priests, religious, laypeople, church structures, and so forth)" (Berryman 23).

The Church's role is to service all people, especially the lower class, by "encouraging and educating the conscience of believers" (43). The service of the Church will allow the faithful to become aware their responsibilities as a Christian "in their personal life and their social life" (43). Priest, religious, and laymen have the task of "concientización" and social education in their Pastoral Action (48-49). Concientización and awareness are interchangeably in the Medellín documents. The "key men" in a position of decision-making include "technicians, politicians, labor leaders, peasants, manages and educated men of all levels of society" (49).

The Medellín documents concentrate on "the insistence on the conversion of men which will in turn bring about the change" rather than focus on structural change (41). The Latin American Church encourages the formation of "freely organized" national communities that act as the intermediary structure between the people and state (43). The influence of elite or authoritative groups is not allowed in the communities composed by all social class especially the lower class (43).

"Thus, for our authentic liberation, all of us need a profound conversion so that "the kingdom of justice, love and peace," might come to us" (41). The kingdom of God is the "unity of God's plan of salvation realized in Christ" in Medellín (121). God's plan of salvation depends on understanding the relationship "between the history of salvation and human history" (CELAM 121). Sin is part of the consequence of the lack of solidarity (41)

"Medellín mark[ed] the beginning of a new relationship between theological and pastoral language" which allowed a larger reach of individuals and groups that can participate actively (Gutiérrez 74). The framework in which the issue of poverty and oppression must be dealt with is widened by the mentioning the importance of salvation and the historical praxis (121). By widening the framework that is worked with the Puebla documents will have to work with this new clarification.

The Puebla document emphasizes the importance of dignity and freedom as part of the path to reach full liberation (168). Freedom is a person's capacity to choose a path in life and "act on [their] own initiative" (168). With freedom the surrounding community can be changed to reflect "our relationship to the world as its master, to other persons as brothers and sisters, and to God as God's children" (168). With this freedom, the dignity of a human can be realized "in and through a community of joint efforts" and require not to fall into the temptations of material goods (168).

Puebla sees development as a failure (279). The hopes for development disappeared due to its inability to deal with the root of all injustices, sin (278-279). The injustices are the product of sinfulness on the personal level and become an issue as the number of people sin increases till it reaches a worldwide level (169). The personal aspect of sin allows the responsibility for liberation pass to every single person, not just authoritative figures (169).

In the document of Puebla, the Church's role is the service of evangelization, which allows the poor to liberate themselves from injustices and allows for a complete advancement (306). One of the Church's services involves educating people. Puebla quotes PP where

education aids the poor for salvation by "perfect[ing] them and help[ing] them grow in humanness" (250). Even though the Church's service is for every human being there is a preference and solidarity with the poor (306).

The role of the Church in this aspect is to aid people through the spiritual aspects of development, evangelization. The Puebla document introduces the new view of evangelization where not is the aim to touch an individual "but also the culture of the person" (178). The presence of "the Church proclaim[ing] the Good News" corrects the sinfulness of a culture (179).

Evaluating Gutierrez's Claim

According to Gutiérrez, *Gaudium et Spes* creates a framework that becomes the starting point for the appearance of the theme of liberation in latter documents (23). He states that GS suggests that developing countries have a need to break from dependence of wealthier nations and that people want to build a new society (Gutiérrez 22).

In my analysis, GS does not suggest the theme liberation of the developing nations from their dependence with developed countries, on the contrary, GS wants cooperation and reform. There is a tendency in GS to direct most of the advice and responsibility on development to authority figures in the current system. GS pleads for the developed countries to help the developing countries with aid, ex. loans and donations, which only strengthens the dependence between the two.

In *Populorum Progressio*, Gutiérrez notes that liberation is a "mere suggestion" within the encyclical (23). There is a bit more emphasis on the equal responsibility between all socioeconmic groups in PP. There is a larger emphasis on the economic structure of development in PP. GS concentrates mostly to explain the importance of the human aspect in

development. Both GS and PP view the poor as are as passive objects waiting for the action of others. Even though PP also asks for reform, it does broaden the framework with its termenology and phrases like man's complete development, in all its dimensions, and remove every obstacle which offends man's dignity (6 & 80).

Gutiérrez believes that term liberation can "be approached as a single salvafic process" that allows the "unity" of various human dimensions with other humans and God (Gutiérrez xiv). Gustavo backs up the word liberation with the way it is used by Christ as a total gift (Gutiérrez xiv). Christ came into history and brought liberation or also known as salvation to the human race as his total gift (Gutiérrez xiv). Gutiérrez explains that the Vatican II council called a "theology of the *signs of the times*" the intellectual analysis and call to "pastoral activity, to commitment, and to a service" (Gutiérrez 7). Gutiérrez states that the Christian obligations mentioned in *GS* are part of the signs of the times (Gutiérrez 7). Gutiérrez believes that the word development cannot express the levels of aspiration in the

> presence in our times, especially in underveloped and oppressed countries, is the struggle to construct a just and fraternal society, where persons can live with dignity and be the agents of their own destiny (xvi).

Adding a humanistic perspective puts "development in a broader context: a historical vision, in which humanity takes charge of its own destiny" (Sigmund 203). At this point a change of perspective occurs because now it is all about the ability of a person to decided their life rather than the change of less than human conditions to truly human conditions (Sigmund 202-203). The word development in the other hand cannot express the level of dimensions liberation can (Gutiérrez xiv).

The start of the usage of the word liberation is at Medellín, which uses the words "integral human development and liberation" next to each other to describe the theme of salvation brought by Christ (Medellín 42).. Medellín sticks with the current structural view meaning that it agrees with reform and the functionalists view on the poor. GS, PP, the Medellín documents express a negative relationship between the current oppressive situations with authority figures, but only believe "that basic change could come through a conversion on the part of the privileged and powerful" (Berryman 24). GS and PP did not go into great detail on all the human dimensions that require change like the Medellín documents did. Medellín uses the words "integral human development and liberation" next to each other to describe the theme of salvation brought by Christ (CELAM 42). By doing this Medellín agreed with Gutiérrez's claim that the term development does not cover all human dimensions without the need of another word in this case, liberation.

Ten years later in the document of Puebla the usage of the term development has been replaced by liberation. The level of clarity of the Puebla documents is the strongest compared to the other documents because it is the respond to clarify Vatican II position of all the previous documents. Medellín shifts the terminology more to liberation and Puebla adopts the term liberation even further to integral liberation. Puebla uses Jesus as a figure who uses liberation and connects it to solidarity and the Kingdom of God in history. The Puebla's conclusive document brought into attention the issue of the social, economic, and political structure itself. Puebla document blamed the current system as the one who caused the poor and oppressed to exist. The socioeconomic differences are part of the structures that Latin American nations. This is the first document to take a stance against the hierarchal structure itself and ask for the replacement of it. The usage of the term development is mentioned only when the document describes the failure development was and the loss of hope on it (279).

Unlike Gutiérrez assertion on the appearance liberation in GS, the theme of liberation starts to appear in PP. GS only brings into discussion the issues of dependence, social class, and poverty into play but does not hint for the liberation of any of these only a reform. The rest of the documents agree with Gutiérrez claim of theme of liberation appearing in their discussion.

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The Effect of Sex, Age, and Socioeconomic status on the Development of Altruism

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Altruism is the selfless concern for the well-being of others. Measures of altruism often focus on specific selfless or charitable behaviors. Past research has identified that participant's age influences altruistic acts, but never explained why gaps exist among age cohorts. Older adults tend to contribute more to the good of the public and perform more altruistic behaviors than younger adults (Freund & Blanchard-Fields, 2012). It is likely that altruistic behaviors are influenced by more than a person's age. Other factors that may influence altruistic behavior include the person's sex, level of educational attainment, and their amount of income. These three factors are likely to influence altruistic behaviors because they also play a key role in establishing the social norms of an individual; making one feel more or less inclined to perform an altruistic act. The present research investigates whether an individual's income, level of education achieved, age and sex contributes to the degree of altruism that they possess. Information from the 2012 General Social Survey was used to evaluate the relationships between altruism, respondents' sex, age, and the socioeconomic status. Using SPSS this paper used linear regressions and tests the hypotheses that higher socioeconomic status correlates with higher levels of altruistic behaviors displayed and that older age cohorts display higher levels of altruistic behaviors. The data reflected that a higher social economic status correlates to higher levels of altruism displayed and that as individual ages they become more altruistic until they reach a peak, and generally become significantly less altruistic. Thus socioeconomic status has an effect on altruistic behaviors displayed, and there is variation amongst the age cohorts when it comes to levels of altruistic behaviors displayed

Introduction

Being altruistic is a quality that people do not necessarily naturally possess or coincide with the needs of the portrayer of the altruistic act. Essentially there seem to be some factor that individuals possess or are stimulated by in the world that invites them to make sacrifices on the behalf of others. These stimulants can be defined as drives that can consist of one's bonds with others, one's sense of efficacy, and, ultimately, one's life perspective. These drives ideally transcend limiting factors such as one's wealth or sex. Altruism is dependent on how these drives shape a person's behavior. To certain extent, altruism is a quality that developed and

impacted by what an individual finds important. Despite its developing nature, there seems to be few explanations to why there are distinct increments across different age groups.

This paper analyzes the connections that lead an individual to being altruistic in different degrees as they age. The question being asked is does a higher socioeconomic status and being older affect the amount of altruistic behaviors being performed. The purpose of this research is to help explain how attributing factors such education, sex and income might correlate to a person being more being more altruistic. By making this comparison, the goal is to see if these factors will act as limiters to the performance of altruistic behaviors or result in an increase in the amount of altruistic behaviors displayed. Ultimately by doing examining this question, this paper attempts to explain why people are altruistic.

Literature Review

Altruism is concept that that can be described through many different facets. Literature has described as it being described as a dividing principle between individuals; take for example the relationship between men and women, here altruism is typically investigated through the different ways men and women contribute to society. Other literature in this field emphasizes an individual's self-efficacy to explain how the capacity of individual responds to whether or not the individual will be altruistic. In addition, several different fields, such as development studies, philanthropy and social biology, explain how a person's interests and bonds motivate them to be altruistic.

However, this area of study is still lacking. For example, this literature does not consider why an individual violates these standards by committing altruistic acts that hinder him or herself in order to help others. In addition, there is a gap in the literature are related to how age and education contributes to development of altruism, as both lead to individuals gaining more skills, confidence and simply experience.

Altruism is defined as the practice of unselfishness and the displaying of general concern for or devoting to the welfare of others. Altruism can be defined as a principle that goes against the grain of an individual's own needs, in requiring a sacrifice on the behalf of the provider of the altruistic service (Wilson 1974). According to Krebs and Van Hestern (1994), altruism is developed in seven stages in which displays the need of individuals to go from being concerned with their own needs to being more selfless (Oliner 2003p.21). Altruism can be divided into two separate categories, altruistic behaviors and altruistic attitudes. Altruistic behaviors are outward expression of selfness; so behaviors such as opening doors , giving blood or other acts of kindness that an individual displays without having any expectations of receiving anything in return for their actions is considered an altruistic behavior. Altruistic attitudes, on the one hand, are considered reflections of inward beliefs that are as selfless but there is no actual physical action displayed despite the thought. For example, having concern on the ethics of big business practices could be considered an altruistic attitude, as it requires an individual to consider the needs of others, despite its effect. As such, altruistic behaviors are physical reflections of an action while altruistic attitudes are reflections of inner thought. On the other hand, it is possible for an individual to display altruistic attitudes while never displaying an altruistic behavior. The distinction between altruistic attitudes and altruistic behaviors can be further clarified by looking at the meaning of the word sympathy. According to Smith (2000), sympathy is an emotion that "merely permits an individual to appreciate or "feel"

the plight of another" (p 105). It is essential to understand the need of sympathy to be able to understand altruism, as for there to be a notion of an individual caring for another individual signifies that there must be some kind of motivation for an individual to be altruistic. For example the term "warm glow" was adopted by Andreoni (1990) to describe the warm feeling a person felt after person donated money to charity. As a result, it can be said that altruism requires two things: first the capability to feel concern for others and, second, some form of sacrifice of the individual performing the altruistic behavior.

Gender Effects

In terms of altruism, neither males nor females can be defined as portraying more altruistic attitudes or behaviors; rather, instead, it can be seen that individuals have different reasons to be altruistic. Take, for example, in comparison to men, women are at least perceived as, less selfish, more caring, friendly, and emotionally expressive, because of their responsibility of birthing children and taking care of children. In comparison men are considered to be more independent, assertive, ambitious, and dominant (Eagly, 2009). This is not to say that women are more altruistic but that men and women are assumed to have certain characteristics based off a social perspective. These perspectives then build bias to the roles that men and women are suspected to fulfill simply because that is how the gender roles worked in the past. However, the importance of gender does not end here. When men and women were examined when it comes to price sensitivity, in a game called "the dictator game," a study found that males and females "demands for altruism" differed. Overall it was found that when it was relatively inexpensive, men were found to give more money, while, when it was relatively expensive, women gave more, resulting in women being

defined as "equalitarian, who prefer to share evenly, whereas men tend to be perfectly selfish or perfectly selfless (Andreoni & Vesterlund, 2011). This finding shows that men and women simply contribute to society in different ways and at different times. However an important point to make is that there is no defining principle that makes women or men to be defined as more or less altruistic. But where there is confusion centers on notions that are made simply based of what is thought to be a gender's role in society. Wood & Eagly (2010) also found that "role-based beliefs also reside in the socially shared perception that women are communal, even if this perception is not true for a given woman. Both dispositional differences and gender stereotypes shape women's behavior" (p. 4). This misconception with the performance of women, when applied to altruistic behaviors displays how people's ideas can create false misconceptions in the difference in altruistic behavior. Theses misinterpretations can result in the creation of the belief that women are thought to be more altruistic because society is use to women playing the nurturing role and, thus, in effect possess higher levels of sympathy, which society then correlates to mean more altruistic.

Education Effects

Efficacy can be seen as a measure of capacity of an individual's capability of performing altruistic behaviors and attitudes. Thus, as an individual is exposed to higher education they, in theory, should be capable of performing more skills and, thus, be more likely to help others. According to Bandura (1982) an individual who has doubt about what they are capable of doing will not a try to accomplish the task regardless of how rewarding the task might be, but instead they will stick to task they are capable of achieving. From this view, it can be said that the capacity of individual can be a limit to how much they are and if

they are willing to display altruistic behaviors. Bandura also explains self-efficacy or, in other words, how their own belief in his or her capacity to execute behaviors affects the goals people set for themselves and the levels of performance achieved in very different situations (1997).

In comparison, a person with a post-secondary education should in theory feel more competent at achieving goals as they should have had at some point in time exposure to resources that those without the same level of education would of have and, thus, display more altruistic characteristics. This concept is extended when you consider whether or not the individual considers him or herself responsible for providing assistance" (Staub, 1978, p140). The fact that the primary purpose of a higher education is to train a person to be skilled in a certain field, one attribute of that education might be greater displays of altruism and sense of responsibility. In comparison to a person who did not reach a higher level of education, it could be said that they are less responsible to be altruistic as they are less skilled. Thus, it is reasonable to say that those would secondary degrees would be more altruistic as society would expect that of them. This motivation can be further explained through Kohn's (1990) distinction of the difference of the "feelings of others" and "feelings for others." In the first example one understands the pain another feels, however, in the second case, one merely thinks of how the other person feels. When it comes to altruism there are many factors that might slightly alter person feelings towards altruistic behaviors and attitudes. However, as the nature of altruism requires sacrifice, altruism also depends on a person's feelings of capability or capacity. Thus the development of altruistic behaviors and attitudes relies on both an individual's sense self-efficacy and their emotional disposition.

Closeness Effect

The module of how the closeness of individuals, or in other words the ties that individuals have with others effects the development of altruism has been study across different fields. In the case of child development it can be see that the development of altruism can be encouraged through the reinforcement of pro-social behaviors (Kohn 1990). In the sociobiology field, for example, these behaviors are explained through three different theories: the blood kinship theory, the mutual aid theory, and the cooperation theory. In the blood kinship theory animals were seen to be altruistic because of their kinship. Charles Darwin gave the example of how worker bees sacrifice themselves to be of service to a queen bee. Mutual aid differs from blood kinship as the individuals do not have to be directly related. Kropotkin (1902) believed that altruism can be seen in other places then family relations; he gave the example of how burying beetles require a buried corpse to lay their eggs, despite that they are solitary insects. So when this is required the beetles will call for several other beetles to complete the task in a civilized manner. This addition in the social biology allotted for altruism to be seen as a behavior that benefits from the bonds of kinship, but shows that it is not completely necessary. Allee (1951) added the concept of cooperation, which denies kinship, and means that individuals do not have to be related by blood to be altruistic. In, addition Alee describes such cooperation as requiring the sacrifice on behalf of a provider of the service. These theories demonstrate the different dynamics and reasons individuals show altruistic behaviors and show that these behaviors are derived from the existence of some motivating factor (Dugatkin1962). Take, for example, Oliner (1988) in his study of survivors of Europe during World War II Here Oliner gives the

example of how Polish women took care of a Jewish baby. Despite how dangerous this was she did so simply because the mother asked her to do so as the Polish ghetto was being liquidated of Jews (Oliner 2003). This display not only shows how powerful an empathetic effect that a personal request has on a person but also how a personal relationship is not a necessary condition or encourager of altruism. This can be further explained by looking at how the environment effects a person's decisions. A study was performed in twelve small towns and four big cites (New York, Philadelphia, Boston, and Chicago) where a small ten years old stood on a busy street and asked strangers if they could call his home because he was lost. On average three quarters of the adults in the small towns provided assistance, while less than half of the adults in the big town provided the same. . These findings were explained by the discomfort effect, which the researchers stated that "city people adjust to the constant demands of urban life by reducing their involvement with others" (Kohn,1990, p.69-70). This study demonstrates how a person's environment effects their willingness to be altruistic. These findings can be explained further by looking at philanthropy in a study on young individuals. Here 93 percent of individuals volunteered simply because they were asked, while only 23 percent of those not asked also volunteered (Payton & Moody, 2008). According to Payton and Moody those that give their time in service were more likely to give financially as time is considered more valuable to individuals then money. The lack of importance of finances can be seen when looking at what could be considered the "elite philanthropist," who donates money to charities and organizations in order to maintain their status.

Richard Barret (1998) further explains this relationship through a seven stage model of corporate consciousness which explains consciousness and motivation. The first three stages are based on greed and selfish reasons; they are the survival consciousness, which focuses on how to make more money; relationship consciousness, which establishes relations to serve the companies; and, finally, self-esteem consciousness, which works to make an individual look good. While the next four consciousness's work towards prosocial attitudes; first there is a transformation, which works towards gaining knowledge, second is organizational consciousness, which give employees spiritual, mental and physical needs; next, there is community consciousness, which emphasizes a sense of community; and, finally, there is societal consciousness, which works to make society a better place. The majority of donations went towards education, culture, health, churches and temples, which shows that philanthropists give to the causes they care about and have attachment to (Oliner 2003). This reflection on the reasons that philanthropy give can be extended to the rest of society. Given this this People are altruistic because they feel motivated by other things they are involved with.

There could be considered to be differences found in between men and women when considering how they contribute altruistically, however this seems to be just a sign of how experience effects the development of altruism. Amongst the variables seem affect the development of altruism, they seem to be dependent on the motivating factors of the environment surrounding the individual. Whether it is the bonds that are seen in the social biology field, or motivation of corporations found in philanthropy, the contributors of the altruism must fell capable to do so, whether concern is finances or skills. Essentially altruism is something involves sacrifice, thus the

individual must have a purpose in order to desire to make this sacrifice.

Given this literature the following hypothesis are tested. A high socioeconomic status level and high altruistic attitudes score will correlate with higher amounts of altruistic behaviors displayed. One's age is positively related with altruistic behaviors regardless of gender: As one ages they may go through more experiences that encourage the development of altruism.

Methods

To test these hypotheses, this study utilized the 2012 General Social Survey (GSS), a nationally representative survey that has been conducted regularly by the National Opinion Research Center since 1972. The sample for this study contained 1302 respondents (44.4% male, n = 578; and 55.6% women, n = 724). Participant age ranged from 18 to 89 and with an average of 48.16 years.

The dependent variable for this study is altruistic behaviors. An index of altruistic behaviors was created by aggregating participants' self-reports of the frequency with which they engaged in altruistic behaviors (see Table 1). The behaviors were measured on 6-point scale ranging from not at all in the past year to more than once a week. Participants' answers to the 7 questions were transformed to reflect the number of behaviors completed per year and used to create an overall index of altruistic behaviors. Sample behaviors included giving food or money to a homeless person, giving a seat to a stranger, and doing volunteer work for a charity. The Cronbach alpha score was found to be .60, an acceptable measure of internal consistency.

Independent variables include measures for selflessness, acceptance of others, socioeconomic status, age, and sex. The variables for selflessness and acceptance of others were used as surrogates for altruistic attitudes. The socioeconomic status variable was created by multiplying the scores of the amount of income earned variable by a recoded the highest grade achieved variable (-1=less than high school; 1=high school or more). This interactive variable for socioeconomic status ranged from -25 to 25, with a lower value meaning that the individual had a low income and a low degree of education obtained, and as the scale increases this indicates that the individual had a higher level of degree obtained and income earned.

Table 1 Dependent and Independent Variables Used

Dependent Variable	Variable Label:	Values
Altruistic Behavior (Cutahead2 Directns2 Giveblood2 Givecharity2 Givehomeless2 Giveseat2 Talked2)	Cutahead2=allows stranger to cut in line; Directns2=gave directions to stranger; Giveblood2=gave blood past 12 months Givecharity2=given money to charity; Givehomeless2=given food/money to homeless; Giveseat2=offer seat to stranger last 12 months; Talked2=talked to some depressed in last 12 months	1=Not at all 2=Once in the past year 3=Two or Three times in the past year 4=Once a Month 5=Once a Week 6=More than Once a Week
Independent Variable	**Variable Label:**	**Values**
SES	Interactive variable created with Education (recoded) and Income (recoded) SES recoded values so that -25 (= low education and low income) to 25 (=high education and high income)	Education (Years 1-20; recoded 1-12=-1; 13-20=1) Income (Income Category 1-25 in increments of $10k; ranging from 1=$10k or below to 25= $150k+)
Age	Age	Years
Young	Dummy variable	1=18-33; 0=else
MiddleYoung	Dummy variable	1=34-46; 0=else
Middle Old	Dummy variable	1=47-61; 0=else
Old	Dummy variable	1=62+; 0=else
Sex	Dummy variable	0=males; 1=females
Selfless	Selfless (R feels like a selfless caring for others	Recoded 1=Never or almost never 2=Almost Never 3=Once in a while 4=Most Days 5=Every day 6=Many times a day
Accptoth	Acceptance of Others (R accepts others even when they do things wrong)	Recoded 1=Never or almost never 2=Almost Never 3=Once in a while 4=Most Days 5=Every day 6=Many times a day

To test the generational cohort hypothesis, age was dichotomized into four generational cohorts. The Millennial cohort contained participants between 18 and 33 years old (25.30%, n =499) (0=nonmillenial, 1=millennial); Generation X cohort contained participants between 34 and 46 years old (23.4%, n =461) (0=no generation x, 1= generation x); the Baby Boomer cohort contained participants between 47 and 61 (26.2%, n =518) (0=non boomer; 1=boomer), and, the Post War cohort contained participants between 62 and 89 (24.9%, n =491) (0=non post war; 1=post war). Age as an interval variable measured in years was also employed to examine the difference between the two models.

Finally, the respondent's sex is used as an additional control variable to test its influence and the literature on altruistic behaviors in comparison to the independent variables of interest. If the literature is correct, there should be no significant differences among males and females in their altruistic behaviors.

Bivariate correlation analysis and multivariate linear (ordinary least squared (OLS)) regression was employed to test the paper's hypotheses.

Results

A bivariate correlation was used first to examine the correlations between the independent and dependent variables but also a preliminary test for multicollinearity (see Appendix B). The correlation matrix showed that altruistic behaviors, measures for altruistic attitudes (selfless2 and accptoth2), age, sex and socioeconomic status (SES) were related but not so strong as to raise concerns of multicollinearity between the independent variables. For example the measures for altruistic attitudes (selfless2 and accptoth2) were statistically significant while weak to moderately

correlated and with altruistic behaviors (.235 with selfless2; .282 with accptoth2) and moderately correlated with each other (.326). The positive correlation between altruistic behaviors and SES (.157) signifies that as individuals increased their SES status, their altruistic behaviors also displayed (again see Appendix B). Similarly, the negative correlation of age with altruistic behaviors (-.148) means that as respondent grow older they display less altruistic behaviors.

Two OLS regression models were utilized to test the hypotheses of the paper. The difference between the models is the deconstruction of the age variable into groups to test whether there were generational differences in altruistic behaviors.

Model I (see Table 2) explained 12% percent of variance in altruistic behaviors (F-test=24.254, prob=.000). Examining the independent variables in the model revealed that socioeconomic status (SES), age and the altruistic attitudes of selflessness (selfless2) and acceptance of others (accptoth2) had significant effects on altruistic behaviors. The standardized beta regression coefficients for the altruistic attitudes measures (selfless2 beta=.163; accptoth2 beta=.202) and socioeconomic status (.120), for example, are positive related with altruistic behaviors, meaning that as individuals display higher levels of altruistic attitudes and socioeconomic status, they will also demonstrate more altruistic behaviors. The negative standardized beta regression coefficients for age (-.08) signifies that as individuals grow older they tend to show less altruistic behaviors. The value of the standardize beta coefficient also show that relatively, altruistic attitudes (selfless2 and accptoth2), and the SES variables had larger impacts on the development of altruistic behaviors.

Model II (see Table 3) explained 13 percent of the variance in altruistic behaviors (F-test=18.545, prob.=.000). Here, a multiple linear regression with altruistic behaviors as the dependent variable was utilized with the separate generation cohorts as the independent variables.

The standardized beta regression coefficients values for each of the three age groups

Table 2: OLS Altruistic Behaviors (Model I)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	15.356	.726		21.145	.000
SES2	.038	.010	.127	3.894	.000
AGE	-.022	.009	-.079	-2.405	.016
SEX2	-.576.	.306	-.061	1.388	.166
SELFLESS2	.444	.094	.163	4.736	.000
ACCPTOTH2	.689	.119	.202	5.776	.000

Adjusted R Square=.121

Table 3: OLS Altruistic Behaviors (Model II)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	14.774	.548		26.939	.000
SES2	.036	.010	.120	3.713	.000
SEX2	-.584	.306	-.062	-1.912	.056
SELFLESS2	.442	.094	.162	4.720	.000
ACCPTOTH2	.693	.118	.203	5.847	.000
POSTWAR	-1.576	.437	-.126	-3.603	.000
GENERATIONX	-.624	.464	-.046	-1.345	.179
MILLENNIALS	-.460	.373	-.043	-1.232	.218

Adjusted R Square=.126

(Millennials, Generation X and PostWar) were negative, meaning that there no differences among the groups tied to age. Moreover, for the PostWar group, the coefficient was not only negative (-.126) but also statistically significant. This means that oldest group displayed the least altruistic behaviors. With respect to altruistic attitudes (selfless2 (beta=.162) and accptoth2 (beta-.203)) and socioeconomic status (SES beta=.120), these independent variables were positive and statistically significant. Finally, the dummy variable for sex (SEX2) was not statistically significant at the .05-level (.056) but would be considered significant at a higher statistically significance standard (.10). Here sex as a dichotomized female measure had a negative standardized beta coefficient (-.062), indicating that females exhibit less

altruistic behaviors than their male counterparts.

Discussion

Despite that the results were not as in depth as one would have liked to find, the overall findings of this paper were mixed. The hypothesis of the relationship between socioeconomic status and altruistic attitudes and altruistic behaviors were confirmed. On the other, the hypothesis for age was the reverse of what was expected. People as they age tend to show less altruistic behaviors. In addition, when age was dichotomized into age groups, the relationships remained negative but only statistically significant for the oldest group, the PostWar respondents. Finally, the hypothesized relationship for the influence of sex was only significant in Model II and at the .10 level and with a very minor effect (beta=-.062) on altruistic behaviors displayed.

The altruistic attitudes of selflessness (selfless2) and acceptance of others (accptoth2) had the greatest impact on altruistic behaviors in both models. This indicates that altruistic attitudes are more impactful on altruistic behaviors than socioeconomic status, age or sex. This finding is congruent with the literature as it displays that a person's disposition if life and how they treat people outweighs one's socioeconomic status.

The socioeconomic status variable, on the other hand, was also important. Recall, that this variable was an interactive variable that measured both income and education level. As such, its impact in the regression model suggests that as individuals received higher degrees of education and larger incomes they developed more intrinsic reasons to be altruistic; it could be possible that such individuals are exposed or form values that they might not have had otherwise. Having a higher level of socioeconomic status could

mean that such individuals are more financially capable of showing altruistic behaviors as sacrificing time and financial assets in comparison to lower socioeconomic status individuals.

Limitations

Ultimately this research was limited by the amount of information that was obtained from the participants from a survey and conducting secondary analysis of such a survey. For example, respondents were not asked to consider of what other resources are available to them, such as, the allocation of their time and capital to compare these resources with altruistic behaviors. Other measures like education was supposed to act as a way of measuring the capability of the individuals to perform acts of altruism, however, this variable does not measure skills or types of knowledge necessary for altruistic behaviors. Thus, there is no way of knowing how much skills or knowledge is necessary or related to altruistic behaviors. In addition to this income and education does not perfectly measure an individual's social status, thus all the individuals characteristics cannot be defined as. This point for example shows that this research did not go too far enough to resolve the noise of the effects of money and education level might have on the individuals' altruist behavior.

Future directions

Future research would redefine this research by creating the capability of measuring the ethics of the individuals. The socioeconomic variable purpose was to measure how a person's different position in society would affect how they would be altruistic. By creating a scale that would measure how ethical a person is could possibly also explain why a person would decide to display altruistic behaviors and attitudes. While altruistic attitudes is similar to ethics but in a way it is also different as it further defines an individual from a wider

span of issues that an individual might be concerned with.

Conclusion

The portion of the hypothesis that stated a higher age correlates to higher amounts of altruistic behaviors went against the hypothesis made as the results showed that individuals become less altruistic as they age. However the socioeconomic variable and the variables measuring altruistic attitudes were significant. This shows that being selfless and accepting others and the capability, as measured by socioeconomic status, to do so is also important for the development of altruistic behaviors. As to sex, it was found that it was significant at a .10 level, but not at the more conventional .05-level, and even when it was accepted as significant it had very minor effect on the explanation of the variance of altruistic behaviors.

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APPENDIX A

The respondents reported different levels of educational attainment as measured by the highest degree earned. Most participants reported graduating from either High School (50.20%, n = 654), or College (18.20%, n = 237). A smaller group of participants reported completing a graduate degree (10.10%, n = 131) or graduating from Junior College (7.80%, n = 102)). In this sample, 13.70% of respondents reported that they did not graduate from High School (n = 178).

Most of the respondents classified themselves as members of the working class (44.20%, n = 575) or the middle class (43.70%, n = 569). A much smaller number of respondents classified themselves as lower class (8.30%, n = 108) or upper class (3.10%, n = 41). Consistent with this information, the median annual family income was between $40,000 and $49,999. Although Most respondents believed that their family income was about average (44.5%, n = 579) or below average (27.00%, n = 351), the majority of respondents reported that they were satisfied or more or less satisfied with their financial situation (71.40%, n = 926).

Correlations

		altruisticb ehaviors2	selfless 2	accptoth2	sex2	old	middleold	middleyoun g	young	ses2	AGE OF RESPONDENT
altruisticbehavior s2	Pearson Correlation	1	.235**	.282**	-.001	.179*	-.006	.044	.035	.157*	-.148**
	Sig. (2-tailed)		.000	.000	.957	.000	.835	.118	.211	.000	.000
	N	1279	992	1275	1279	1279	1279	1279	1279	1090	1274
selfless2	Pearson Correlation	.235**	1	.326**	.128**	-.064*	.022	-.015	.038	.092*	-.066*
	Sig. (2-tailed)	.000		.000	.000	.042	.478	.639	.228	.007	.038
	N	992	1005	1004	1005	1005	1005	1005	1005	856	1003
accptoth2	Pearson Correlation	.282**	.326**	1	.100*	.157*	-.027	.094**	.073**	.057	-.162**
	Sig. (2-tailed)	.000	.000		.000	.000	.324	.001	.008	.058	.000
	N	1275	1004	1294	1294	1294	1294	1294	1294	1100	1290
sex2	Pearson Correlation	-.001	.128**	.100**	1	.040	-.058*	.021	-.031	-.010	.022
	Sig. (2-tailed)	.957	.000	.000		.073	.010	.341	.175	.695	.319
	N	1279	1005	1294	1974	1974	1974	1974	1974	1684	1969
Old	Pearson Correlation	-.179**	-.064*	-.157**	.040	1	-.202**	-.276**	-.290**	.075*	.740**
	Sig. (2-tailed)	.000	.042	.000	.073		.000	.000	.000	.002	0.000
	N	1279	1005	1294	1974	1974	1974	1974	1974	1684	1969
Middleold	Pearson Correlation	-.006	.022	-.027	-.058*	.202*	1	-.223**	-.235**	.014	.273**
	Sig. (2-tailed)	.835	.478	.324	.010	.000		.000	.000	.572	.000
	N	1279	1005	1294	1974	1974	1974	1974	1974	1684	1969
Middleyoung	Pearson Correlation	.044	-.015	.094**	.021	-.276*	-.223**	1	-.321**	.081*	-.259**
	Sig. (2-tailed)	.118	.639	.001	.341	.000	.000		.000	.001	.000
	N	1279	1005	1294	1974	1974	1974	1974	1974	1684	1969
Young	Pearson Correlation	.035	.038	.073**	-.031	-.290*	-.235**	-.321**	1	-.019	-.711**
	Sig. (2-tailed)	.211	.228	.008	.175	.000	.000	.000		.429	.000
	N	1279	1005	1294	1974	1974	1974	1974	1974	1684	1969
ses2	Pearson Correlation	.157**	.092**	.057	-.010	.075*	.014	.081**	-.019	1	-.042
	Sig. (2-tailed)	.000	.007	.058	.695	.002	.572	.001	.429		.088
	N	1090	856	1100	1684	1684	1684	1684	1684	1684	1681
AGE OF RESPONDENT	Pearson Correlation	-.148**	-.066*	-.162**	.022	.740*	.273**	-.259**	-.711**	-.042	1
	Sig. (2-tailed)	.000	.038	.000	.319	0.000	.000	.000	.000	.088	
	N	1274	1003	1290	1969	1969	1969	1969	1969	1681	1969

A Road to Success: An Investigation Into Effortful Control in Minorities and Children From Disadvantaged Backgrounds

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This study examines demographic correlates of individual differences in children's Effortful Control, which refers to their abilities to modulate emotions and behaviors in response to environmental contexts. Specifically, it will explore demographic factors of ethnicity, household income, and birth order. Data was be drawn from a sample of 254 community children from the East Lansing, MI area. Effortful Control (EC) was measured by the parent report Child Behavior Questionnaire and laboratory assessment. Pearson Product-Moment Correlations were used to determine the strength of the relationships between EC and age, birth order, household income. A One-way Analysis of Variance was conducted to determine the difference in means with regards to the relationship of ethnicity and EC. Ethnicity was found not to have a significant relationship with EC, and relationships between income and some of EC's subscales were found significant This study found that siblings influenced the subscales of EC, but not the student's overall EC level.

A Road to Success: An Investigation Into Effortful Control in Minorities and Children From Disadvantaged Backgrounds

Minorities, which includes Latinos, African-Americans, and all others who are not Caucasian, non-Latino, drop out of high school at a much higher rate than their Caucasian, non-Latino counterparts; in fact, a study conducted by the U.S. Department of Education, National Center for Education Statistics (2015) found African-Americans' dropout rate from high school was two percent higher during 2013 than Caucasian, non-Latino students. The same study found the Latino dropout rate was ten percent higher than African-Americans. Even though the dropout rates for all ethnicities has decreased from 1990 to 2013, a gap that should not exist remains (NCES, 2015). Therefore, one must investigate methods to decrease minority dropout rates to match their Caucasian, non-Latino counterparts.

Minority students tend to have lower socioeconomic status, thus creating struggles that may hamper their academic progress (American Psychological Association, 2012). The same study by the American Psychological Association (2012) found students who come from low-income families were five times more likely to drop

out of high school than students who come from higher income families. Unfortunately, previous investigations have not been able to determine a specific cause as to why minority students are more likely to experience academic problems (Gleason & Dynarski, 2002). Currently, the risk factors associated with dropout rates are demographic characteristics and family background, which include ethnicity, age, socioeconomic status (SES) factors such as parental education level and household income, prior school performance, such as grades in class and scores on standardized testing, school characteristics, and personal and/or psychological characteristics (Gleason & Dynarski, 2002).

Because students cannot control demographic characteristics and family background, and have little control over school characteristics, one must ask how or what can a student control that can potentially increase success in academia? This study examines a temperament trait called Effortful Control (EC), which describes individual differences in the ability to suppress dominant emotions and behaviors in response to contextual cues, to flexibly alter behavior, and to regulate impulsive tendencies. Higher levels of EC are associated with better academic performance as early as kindergarten (Blair & Razza, 2007). EC develops rapidly over the first several years of life, such that some children likely enter school with less developed EC abilities, putting them at risk for poor outcomes because they have yet to develop the skills that enable them to respond to the structure of the classroom context. It is possible that one source of academic problems among ethnic minority and economically disadvantaged children is their levels of EC.

With previous studies investigating how age, ethnicity, and socioeconomic factors influence EC levels, very little, if

any, research has been done regarding the influence of siblings or lack of siblings. Knowing that research has shown siblings' influence upon one another in different aspects such as observational learning and sibling deidentification, this study investigates if having siblings influence EC by examining how the presence of younger an dolder siblings influence EC (Whiteman, Julia, & Bernard, 2014). This study also investigates the effect of being an only child may have upon EC.

This investigation has two hypotheses: H_1: children from minority populations will have lower mean levels of EC than Caucasian, non-Latino children. H_2: EC will be positively correlated with children's family household income.

Method
Participants
Community children (n_{males}=128 males, $n_{females}$=126, M_{age} = 4.6 years, SD=1.4 age range: 3-7 years) and their parents were recruited from the East Lansing, Michigan area. Ethnicities of children included Caucasian, non-Latino (n= 116, 45.7%), African-American (n=7, 2.8%), Asian (n=2, 0.8%), Latino/Hispanic (n=9, 3.5%), Bi- or Multiracial (n=21, 8.3%), other (n=2, 0.8%) and the remaining (n=97, 38.2%) of ethnicities were unreported. The large sample included 272 children, but 18 were removed due to missing data on the variables of interest in this study. Children were compensated with small prizes, and parents with financial compensation.

Materials and Procedures
Parent report. Parents completed the parent report Child Behavior Questionnaire (CBQ; Rothbart, Ahadi, Hershey, & Fisher, 2001). The CBQ consists of 194 items that test three temperament dimensions – extraversion, negative affectivity, and effortful control, the latter of

which is the focus of this report. The effortful control dimension includes the following subscales: impulsivity, attentional focusing, attentional shifting, and inhibitory control. Parents also provided demographic information on children, including the age and number of their siblings, the family's yearly income, and maternal and paternal ethnicity and education levels.

Laboratory assessment. Children completed a battery of 16 tasks designed to measure temperament traits, including Effortful Control (EC). Tasks involved emotionally evocative events and interactions with people and stimuli designed to measure individual differences in student. For this study, we examined objective coding of childrens' EC, consisting of ratings of the children' activity level, impulsivity, noncompliance, and attentional control. Coding was conducted by trained raters who separately rated each task. EC scores consisted of the average of these four ratings across the sixteen tasks.

Data analysis

To investigate the relationships among the variables, bivariate Pearson Product-Moment Correlations were conducted and followed by linear regression analyses. The independent variables included used in the PPMC analyses are as follows—age, number of same age siblings a student has, number of younger siblings a student has, number of older siblings a student has, whether or not a student is an only child, and maternal and paternal report of household income. The dependent variables include overall EC level and its subscales, impulsivity, attentional focusing, attentional shifting, low pleasure intensity, and inhibitory control, both lab and parental reports. To investigate the relationship between ethnicity and the dependent variables, a One-way Analysis of Variance was performed. Because the sample was majority Caucasian, non-Latino, and

unreported, ethnicity consisted of two levels: Caucasian, non-Latino and Minority. The dependent variables remained the same as when the PPMC analyses were conducted.

Results

Of the relationships between EC and demographics investigated, eight associations were found to be statistically significant. Lab-assessed impulsivity was positively associated with the number of older siblings a student had, $r=.146$, $p=.024$. In other words, the greater number of older siblings a student had, the higher the student's impulsivity score was. The second significant association found was between the mother's reported activity level and father's reported household income, $r=.247$, $p=.016$. This means that as income increases, the child's activity level will increase. The third significant association found was between mother's reported inhibitory control and income, $r=.208$, $p=.044$. This means that as income increases, then the child's inhibitory control will increase. The fourth significant association found was between mother reported impulsivity and father's reported income, $r=.234$, $p=.023$. This means that as income increases, the child's impulsivity will increase. The fifth significant association found was between the number of same age siblings a child had and fathers' reports of the child's inhibitory control, $r=.190$, $p=.035$. The sixth significant difference found was between the number of same age siblings, which was defined as being the same chronological age as the participant, a student had and mother's report for children's attentional shifting, $r=.172$, $p=.016$, which means the student could shift their attention when asked more easily (Rothbart, Ahadi, Hershey, & Fisher, 2001). This results suggests that the greater number of same age siblings a student has the higher the student's inhibitory control score was. The seventh significant

association was between a student's age and mothers' reports of children's attentional shifting, $r=.154$, $p=.031$. This results suggest that as the student ages, the student's attentional shifting score will increase. Lastly, the eighth significant difference found was between the number of same age sibling a student had and father's reported low pleasure intensity, $r=.255$, $p=.004$. This result suggests that the greater number of same age siblings a student has, the higher the student's low pleasure intensity will be, which means a child finds pleasure in low intensity stimuli (Rothbart, Ahadi, Hershey, & Fisher, 2001).

A one-way analysis of variance was conducted to investigate differences between ethnic groups on EC and its subscales. No significant difference was found among the independent variable and dependent variable. Ethnicity did not influence EC or its subscales.

Discussion

The first hypothesis was rejected. No significant difference was found between minority children and Caucasian, non-Latino children. However, because the ethnic breakdown of the sample was not diverse, meaning majority were Caucasian, non-Latino, or unreported, with a very small proportion of minorities, the results may not reflect the population. Please note the ethnic breakdown of this sample does reflect the Lansing, MI population, but the sample does not represent the national ethnic breakdown. The second hypothesis was rejected. Even though a significant association was found between household income and mother's reported inhibitory control, mother's reported impulsivity, and mother's reported activity, the overall EC level was not found to be significantly associated with any independent variable. Please note that mother and father each answered how much household income is made. This explains the why some variables were found significant with father reported income only and why one variable was significant with both, mother and father, reported household income. For future research, both parents should only complete one household income question together. However, speculation serves to think that children with more household income will more than likely have time with parent figures or access to care that teaches behavior skills that require one to use effortful control. Lower household income families tend to have parents who work often, thus not being able to teach the child how to regulate their behaviors, so further investigation into the relationship between household income and EC needs to be repeated. A significant association was found between the child's age and mother's reported attentional shift control. As a child ages, they develop overall, one these developments being greater attentional control. Therefore, this relationship was expected. Regarding the relationship between a student with siblings or without siblings and EC, no significant difference was found. However, future research should investigate this relationship using a more evenly distributed ratio of children with a sibling or siblings and children without a sibling or siblings. Perhaps the most interesting find was the significant differences between the number of same age siblings and the student's age with mother reported attentional shift. Another significant difference found was between the number of older siblings a student had and lab reported impulsivity. Even though sibling(s) were not shown to have influence upon the overall EC level, sibling(s) were shown to have influence upon EC's subscales. Therefore, these findings encourage further research into sibling influence upon EC.

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A Food Desert Within a Low-Income Neighborhood

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According to USDA, a "food desert" is urban neighborhood or rural town with limited access to fresh, healthy and affordable food. Many areas within the United States have very limited access to grocery stores. These areas are surrounded by fast food restaurants and other food vendors that offer few healthy, affordable food options. These food deserts contribute to an unhealthy diet and can lead to obesity and other diet-related diseases, such as diabetes and heart disease. The purpose of my study is to explore the alternative sites, where individuals buy fresh produce within a USDA identified food desert community of San Antonio, Texas that has restricted access to fresh produce ("USDA Economic Research Service"). This study will help clarify how a low-income community responds to the food desert status through availability of fresh produce. I accomplished this by collecting primary, qualitative data through observational studies of the availability of fresh produce, specifically fresh fruits and vegetables within the low-income neighborhood around St. Mary's University in San Antonio, Texas. I also used quantitative data such as household income and population statistics from the 2010 Census of the St. Mary's Revitalization Area (US Census Bureau, Census 2010). The study suggests that the alternative food vendors do not frequently offer fresh, healthy produce and the lack of availability of fresh produce is existent within a low-income food desert community in San Antonio, Texas.

According to a study that analyzed food deserts in terms of neighborhood characteristics of race, ethnicity and socioeconomic status, it was concluded that low-income neighborhoods have fewer supermarkets, with 75 percent of those stores in middle-income neighborhoods (Powell, Slater, Mirtcheva, Bao, & Chaloupka, 2007). There is an injustice in the way that food is distributed throughout cities across the United States. Fewer supermarkets are available in many low-income neighborhoods, meaning there is less access to fresh, healthy produce. African American neighborhoods have 52 percent less supermarkets than White neighborhoods, and Hispanic neighborhoods have only 32 percent as many chain supermarkets compared to non-Hispanic neighborhoods. This lack of access to fresh

produce can have detrimental effects on an individual's health as well as the overall health of the environment. This lack of access to healthy food may serve as a systematic local area barrier that exists by race, ethnicity, and income (Powell, et al., 2007).

The lack of healthy, fresh food in low-income and minority neighborhoods highlights the importance of several public policies that can and should be improved. This issue has recently gained interest among researchers and policy makers; the relationship between the food environment and health consequences has recently grown. Studies have shown that food deserts exist universally and research has been done to show ways that communities respond to this food deprivation. Alongside these studies, researchers agree that awareness should be raised of the lack of access to fresh, healthy food in neighborhoods, specifically low-income neighborhoods.

Literature Review
Food Deserts

In an article by Beaulac and Cummins (2009), a "food desert" is defined as an area characterized by poor access to healthy and affordable food that may contribute to social and regional disparities in diet and diet-related health outcomes. The majority of food desert research and knowledge comes from the United States and the United Kingdom. However, the term "food desert" originated in Scotland in the early 1990s to describe the poor access to affordable healthy food (Beaulac, Kristjansson, & Cummins, 2009). According to an article from the Journal of Planning Education and Research, the term food desert needs to define four elements; geographic unit of analysis, what is considered healthy foods, a measurement for determining low access to healthy food, and determining which populations with low

food access lack the resources to access food from farther vendors (Leete, Bania, & Sparks-Ibanga, 2012). This article discussed that every published study that has identified food deserts has used different measures for each of the four elements of the term.

In this study, I will use the USDA's definition of a food desert; they define it as an urban neighborhood or rural town without access to fresh; and affordable food. Which is identified by the combination of low income and low-access ("Food Deserts"). Low-income communities are defined by a poverty rate of 20 percent or greater, or a median family income at or below 80 percent of the area median family income. The areas that qualify as low-access must have at least 500 individuals or at least 33 percent of the population living more than one mile from a supermarket or large grocery store (in urban areas) ("Food Deserts").These areas may have very limited access to grocery stores and are surrounded by fast food restaurants and other food vendors that offer few healthy, affordable food options.

Community Responses

A recent study published in the National Center for Chronic Disease Prevention and Health Promotion Journal showed that mobile fruit vendors in Oakland, California lead to an increased access of fresh fruit and vegetables for school children (Tester, Yen, & Laraia, 2012). The study explored the extent to which school children purchase precut and bagged fruits and vegetables. The study was conducted over 14 days in the fall of 2008 where the researchers observed a frutero that sells fruits and vegetables at the entrance of an elementary school in Oakland, California. Of the frutero's consumers, 59 percent were elementary-school students. The researchers noted that, "…with each successive day, an average of 1 additional bag of fruits and

vegetables was sold by the frutero and 1.5 fewer innutritious foods by a competing vendor" (Tester, Yen, & Laraia, 2012). The study concluded that more policies that encourage the sale of healthy food from mobile vendors around schools, and neighborhoods should be passed.

Mobile food vendors are common in low-income neighborhoods and are often located in areas with fewer supermarkets, and therefore less access to healthy options (Tester et al., 2012). In New York, the city's Department of Health and Mental Hygiene recognized poor health effects are likely worsened by a lack of fresh produce (Lucan et al., 2011). To battle this problem, New York began a "Green Cart" program in 2008 in an effort to increase fresh fruit and vegetable availability. The city placed 61 "Green Carts" in the most underserved areas around New York which sold fresh, healthy produce such as fruits and vegetables out of carts on street corners (Lucan et al., 2011).

Recent efforts in urban communities are being made to promote more fruit and vegetable consumption through community gardens. Community gardens are becoming exceedingly popular across the United States. The American Community Gardening Association estimates there are more than 18,000 community gardens in the United States and Canada (McCormack, Laska, Larson, & Story, 2010). In Flint, Michigan, there were several new projects of neighborhood community gardens in the 1990's funded by neighborhood associations, churches, and nonprofit organizations (2008). These projects generally consisted of community members coming together and gardening on vacant land in their neighborhoods in the hopes of improving neighborhood aesthetics, community development, physical activity, and dietary habits of the community (Alaimo, Packnett, Miles, & Kruger, 2008). This study of Flint neighborhoods concluded that access to fruits and vegetables in Flint, Michigan was extremely limited. Although there was a popular farmer's market open often, the majority of vendors selling food within the Flint city limits were convenience stores that sold mostly liquor, chips, and sugary drinks. Community gardens offer great potential as a resolution to the limited availability of fresh produce in urban neighborhoods.

In many food desert associated studies, researchers conclude that local, state, and federal governments should collaborate to give neighborhoods close access to fresh produce and promote healthy eating. In a study in Britain on how to combat food deserts, interviewees thought of a few solutions; establish better and possibly free transportation from homes to supermarkets in cooperation with the stores or as part of a local transport strategy, widening the range of healthy foods available locally by maintaining local shops and encouraging shop keepers to provide and promote healthy options. Enabling alternative ways of obtaining food through food co-ops, home deliveries or grow-it-yourself plans was also suggested (Reisig & Hobbiss, 2000). Along with all the possible solutions to food deserts, awareness and outreach can make a difference. Knowledge and motivation are necessary to create demand for healthier foods and enabling a demand-led, market-based solution (Reisig & Hobbiss, 2000). Logically, tackling food poverty needs an inclusive approach, encompassing both issues of poverty and the food supply system, as well as involving communities, the public sector, and the private sector (Reisig & Hobbiss, 2000).

Research Focus

Many recent studies focus on the presence or absence of supermarkets, however not many examine the interaction between the community and other non-

traditional food vendors such as fast-food restaurants, corner stores, gas stations, 'pop-up' stands, fruit vendors, etc. where many people buy food. I will take a closer look at these different food options and the community's responses/developments around the specific food desert neighborhood of St. Mary's University in San Antonio, Texas. Less than a five minute drive are more than ten fast food restaurants, about fifteen taco vendors, and a few convenience stores; but how many of these have fresh fruits and vegetables? The purpose of my study is to explore the ways that individuals buy fresh produce within an identified low-income community of San Antonio, Texas that has restricted access to supermarkets and fresh produce, so that there will be a greater understanding to the neighborhood response in regards to the availability of fresh fruits and vegetables.

Methods

This research is a cross-sectional study of the neighborhood community within a two mile radius from St. Mary's University in San Antonio, Texas. These observations were done over a four week period from June 1 to June 25, 2015. In these four weeks, I observed the availability of fresh produce within the neighborhood at several vendor locations as well as gathered visual data by taking pictures of the produce (or lack thereof). I began the first days of my observation by driving up and down the streets of the neighborhood. I did this in the mornings, afternoons, and late afternoons, looking for vendors that might sell fresh produce. I used Google Maps to save the places that I had seen so I could document the locations and remember which vendors to visit later. These vendors included the Valero gas station, Shell gas station, Big Star Food Mart, Padilla's Grocery, Los Cocos, Katemaco Fruteria, Bandera

Convenience Food Store, and Fruteria Las Gueras.

At gas stations and convenience stores, I would walk up and down every aisle looking for fresh fruit or vegetables and taking pictures when I could. These small stores generally took about five to ten minutes to walk through. The largest and busiest vendor was the Fruteria Los Cocos which I visited three times; June 4th at 12:00pm, June 9th at 2:45pm, and June 15th at 7:45pm. I spent approximately 30 minutes there every visit. At Los Cocos, I bought a fruit cup, sat down, took a picture of my colorful cup of fruit, ate slowly, and observed. In all of these observations I gathered detailed field notes that include; location, time, date, demographics, quality/cost of fresh produce, and other actions taken by customers.

The data collected from the field notes was analyzed through open coding to identify culturally relevant patterns. Coding my field notes from these vendor locations, I found that "food" and "demographics" were two large themes. Within the "food" code, "fresh produce" and "price" were reoccurring notes. Within the "demographics" code I included "location" and the "Hispanic" code. The "fresh produce" code in my field notes identified the fruits cups and several bananas, including the pictures I took of these food items. The "Hispanic" code was very popular; the vendors themselves have Spanish names, the employees spoke Spanish, and about half the customers spoke Spanish either to each other or to speak to the employees. The Hispanic theme was evident within the convenience stores; even when there was not fresh produce there was always a large variety of Mexican candies and snacks.

The visual data that I gathered through photographs shows the available produce, the location, as well as the contrast

of the unhealthy foods in the convenience stores. I have pictures of colorful fruit cups, almost-bruised bananas, and aisles of chips and candies. No vendor permission was needed for the observation or photography given the public nature of the produce vendor setting.

In addition, I used the quantitative data of household income from the 2010 Census of the St. Mary's Revitalization Area to qualify the community I was studying as low-income (US Census Bureau, Census 2010, 2013). I was able to apply the census data for the St. Mary's Revitalization Area to my neighborhood study since the area from the census almost perfectly matches the community I studied. The census also showed that almost all of the population is Hispanic, a factor that explains the large Hispanic theme in my field notes (US Census Bureau, Census 2010, 2013). Along with the census data, the USDA has an online Food Access Research Atlas where I confirmed that the neighborhood around St. Mary's University that I studied is considered a food desert ("USDA Economic Research Service"). The USDA's Atlas identifies this community as a food deserts by the combination of low income and low-access status.

Findings

The 2010 Census for the St. Mary's Revitalization Area showed that 92.2 percent of the population of the neighborhood around St. Mary's is Hispanic (see Figure 1); 32.3 percent of the population has a household income less than $15,000, and 20.6 percent has a household income between $15,000-24,000 (see Figure 2). Keeping these household incomes in mind, 43.6 percent of the households in the area have children, and the average family size is 3.64 people per household (US Census Bureau, Census 2010, 2013). These statistics are in agreement with the USDA's definition of a food desert area. The

neighborhood is low-income according to the USDA since the poverty rate is greater than 20 percent and qualifies as low-access by having more than 33 percent of the population living more than one mile from a supermarket or large grocery store ("Food Deserts"). This information is visually presented in the online Food Desert Atlas; and the neighborhood area that I observed is shown in Figure 3.
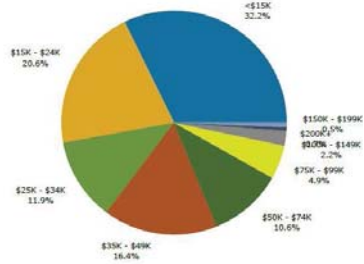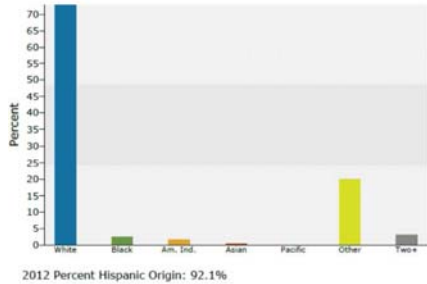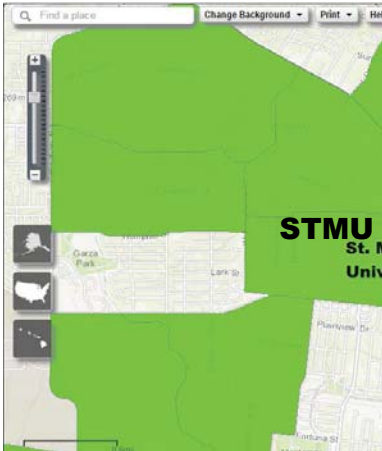

Figure 1 &2 US Census Bureau, Census 2010 Summary File 1. 2013.

Figure 3 USDA Economic Research Service - Go to the Atlas. 2

The dark shaded blocks show the areas that qualify as a food desert, identified by the combination of low income and low-access ("Food Deserts"). These areas are defined by a poverty rate of 20 percent or greater, or a median family income at or below 80 percent of the area median family income and have at least 33 percent of the population living more than one mile from a supermarket or large grocery store ("Food Deserts"). Every vendor location that I observed was within these shaded regions of food desert areas. This area has very limited access to grocery stores and is surrounded by fast food restaurants and other food vendors that offer few healthy, affordable food options. In this San Antonio food desert specifically, there are thirteen fast food vendors, and fifteen Mexican/taco restaurants, compared to the three places I found that sell fresh produce.
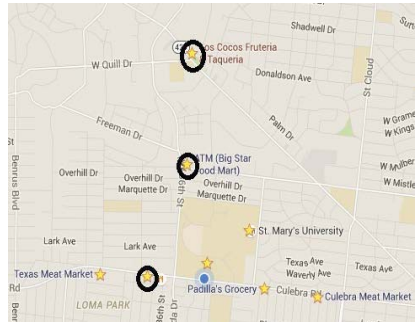
Figure 4 Google Maps around St. Mary's University. 2015

Figure 4 shows circles on the vendors that sell fruits or vegetables in the area of the defined USDA food desert. These vendors include Big Star Food Mart, Los Cocos, and Katemaco Fruteria, all less than or close to a mile away from St. Mary's University. My first observation included Big Star Food Mart, a three minute drive, an eleven minute walk, and approximately a ten minute bus ride that leaves every 40 minutes from St. Mary's University ("Google Maps around St. Mary's"). It is open every day from the early morning to around midnight. This convenience store has aisles and aisles of every candy you could imagine, chips, household items, cooking necessities, beer, sugary drinks, cigarettes, phone accessories, and I could not find any fruits or vegetables.

Figure 5. Bananas at Big Star Food Mart

I decided to buy a drink, so I went up to the cashier and finally saw a box of coconut water with a few bananas behind it (see Figure 5). These speckled bananas were priced at a dollar each, much more than at the local grocery story.

Figure 6. Fruit Cup from Los Cocos.

Katemaco Fruteria and Los Cocos Fruteria sell the popular Mexican fruit cup which overflows with a variety of fruits of your choice including: watermelon, pineapple, papaya, jicama, cantaloupe, strawberries, cucumber, grapes and coconut, almost always with the addition of a salty chili powder, and lime juice. Fruit cups are a great addition to the food desert neighborhood in San Antonio by giving the community a way to consume fruit without needing a distant supermarket. However, the primary concern with fruit cups would be the high levels of salt impacting the health benefits of this fruit, as well as the extra price for the fruit cup being prepared.

Katemaco Fruteria is only a one minute drive, a seven minute walk, and a three minute bus ride that leaves every 40 minutes away from St. Mary's University, but it is open only during the afternoons and never busy ("Google Maps around St. Mary's"). Los Cocos on the other hand is always busy, but it is a five minute drive, a 35 minute walk, and a 30 minute bus ride that leaves every hour ("Google Maps around St. Mary's"). In my three observations at Los Cocos, I found that

about half of the customers I observed purchased fruit cups at three dollars each. One lady bought a large fruit bowl for twenty dollars. The other customers bought other popular Mexican snacks like nachos, *raspas* (snow cones), Cheetos covered in cheese, and corn in a cup. The customers included working individuals taking a break from work, families, couples, and even a few policemen.

On my first day of going to Los Cocos, a man in front of me offered to buy my fruit cup for me since there is a policy that a customer cannot pay with a credit card if their purchase is less than $5.00. A fruit cup is $3.00, so the man asked me if I was getting a fruit cup and if I was if he could pay for mine. Although I hesitated at first, I agreed to this and then this exchange opened up a channel for conversation. With a slight Hispanic accent he asked,

Do you like fruit cups with the chili on top?

I explained that I do but I know that it is not the healthiest option. Then I asked him to share what he thought about it. He explained,

I do like the chili on the fruit, but I decided to get my fruit cup without the chili today. For lunch I had a McDonald's salad, it wasn't bad! It comes with a bed of greens and a couple of cherry tomatoes. It's only ninety calories, a little more than a dollar, and if you want to get it with grilled chicken it only adds like 130 calories. I am trying to eat healthier.

His fruit cup was a continuation of his healthy choices for the day. After this exchange, his fruit cup was ready to pick up from the counter so before he left I thanked him again very much for his kind gesture of buying my fruit cup for me and wished him a good day. This was a very lucky occurrence; every other location I visited

was either empty or the individuals were not feeling as talkative as this kind man.

Other locations that I observed in the USDA's defined food desert area include: Bandera Convenience Food Store, two miles away, Shell gas station, and the Valero gas station, that are both about 0.2 miles away from the University ("Google Maps around St. Mary's"). None of these locations had any fruits or vegetables available for purchase. They all had chips, candy, canned food, beer, wine, soda, juice, tea, ice cream, cigarettes, and so much more, but no fresh, healthy food. The Shell gas station did have a small section with eggs, milk and some lunch meat, but this is not the fresh food that will eliminate the diet-related diseases such as obesity, diabetes, and heart disease.

Discussion

From my observations in this Hispanic food-desert community, the best option for finding fresh fruit in the neighborhood is the popular fruterias that sell fruit cups. Places like Los Cocos are frequent stops for couples, families, and individuals like myself looking for something close and different from the processed food available at gas stations and convenience stores. The concern then is that I did not find any vegetables or whole fruits (except the bananas at Big Star Food Mart). My expectations were higher for the convenience stores' availability of fresh produce, as were my expectations for finding independent vendors like pop-up stands or individuals that sell produce out of the back of their truck.

These findings imply that the food desert problem is very real; this low-income community has very little access to fresh produce. While supermarkets are only a few miles away, this community has a higher percentage of individuals without transportation which makes the reality of

going the supermarket that much harder. Bus transportation is not free, it takes up a large amount of time from the day, and makes carrying grocery bags difficult. This indicates a connection between the food environment and the community's health. The lack of fruits and vegetables in an individual's diet can lead to the common problems of obesity, diabetes, and heart-disease. Awareness should be raised to policy makers as well as community members so that the problem of limited access to healthy, fresh produce can be resolved for the better health of the environment and it's residents.

Within San Antonio there are several efforts to address the lack of grocery stores in the community by growing community gardens such as an urban farm around the Children's Hospital of San Antonio, Culinarian Urban Farm, Roots of Change Organic Community Garden, Spurs Community Garden, and many more that are all assisted by Green Spaces Alliance Community Gardens Network organization (Kako). As an unintended part of my observation study, I visited one of the many community gardens within San Antonio, Roots of Change Organic Community Garden. This garden was launched by the Southwest Workers Union that noticed that the East Side neighborhoods of San Antonio did not have enough grocery stores to provide the community with access to fresh produce ("Roots of Change"). Additionally, the Union observed that no stores in the areas offered organic produce, and the cost and travel needed to shop for such items was out of reach for most East Side San Antonio families. A member of San Antonio Housing Authority explained that "a trip to the closest supermarket by bus takes three hours, even though it's just two miles away. A quick trip outside to the garden may change the minds of some residents about where we should get our food." ("Roots of

Change"). This community in the heart of the East Side works to educate and promote awareness of the local, alternative methods of growing fresh, organic produce.

Visiting Roots for Change Community Garden was an energizing experience that gave me a lens to see that the lack of supermarkets has opened the door for the community to collaborate and create gardens such as Roots for Change. Excitingly, the community garden's fresh organic produce is available to anyone willing to spend at least 30 minutes helping maintain the garden. Since volunteering, I have received fresh peaches, mint, Swiss chard, tomatoes, green peppers, carrots, jalapenos, cucumber, and an onion, all for free! There is a wide variety of vegetables, fruits, and herbs in the Roots of Change Organic Community Garden where the friendly, laidback staff are knowledgeable about what produce to harvest in the respective seasons.

The closest community garden to the St. Mary's University neighborhood is 2.4 miles away, at the Gardens of St. Therese ("Google Maps around St. Mary's"). This garden is behind The Basilica of the National Shrine of the Little Flower. The Basilica teamed up with Green Spaces Alliance of South Texas to create a community garden that parishioners and volunteers adopt and maintain as well as getting to take home the produce from this garden's harvest. These community efforts are extremely beneficial and should be encouraged along with building community awareness of opportunities like this community garden.

Efforts are being made throughout the United States to combat food deserts and the term "food desert" is becoming a buzzword in research and public policy. In this qualitative research study, it was shown that a food desert community in San Antonio, Texas does in fact lack availability of fresh produce. Additionally, the alternative food vendors do not frequently offer fresh, healthy produce. The principal

Figure 7 Produce from Roots of Change.

concern would be the health implications of an absence of fruits and vegetables in an individuals' diet. Furthermore, in a world growing with the concern for environmental sustainability, food deserts should be recognized since the consumption of fruits and vegetables uses much less of our resources (such as water, electricity, and fossil fuels) than processed foods.

Limitations

In my observational research, I understand that the data is seen through my eyes, so I did my best to be unbiased. Understandably without interviews of the community members I am unaware about how individuals feel about the availability of fresh produce within their own neighborhood. Furthermore, with only four weeks of observations I could not see how the produce selection varies with season or other variables.

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War and Women's Work: Medical Military Duty in WWII and Women's Status

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This summer research project focuses on women in the US military during World War II, but subsequent research will expand to focus on foreign women's experiences in both allied and enemy armies in order to test the generalizability of my findings or identify any uniqueness in the US female case. The purpose is to explore the successes these women gained during their military service despite immense obstacles that prevailed. War, with its high demand for soldiers, often creates opportunities for marginalized populations to professionalize or otherwise progress. This summer research tests my conjecture that war provided a lasting benefit for women to professionalize in the field of medicine. In the course of that research, I discovered that medical military service did in fact professionalize women in the field of medicine, and not only in the sub-field of nursing. The primary source documents I used throughout my research, including collections consulted at the premier military medical archive in the United States, the AMEDD Museum at Fort Sam Houston, TX, as well as coverage from the New York Times have supported my working hypothesis and shown that despite major obstacles, US women successfully professionalized in various medical roles during and after WWII.

Literary Review

Historians have done little research on the impact of women's professionalization thanks to medical military service. Most scholarship treats non-traditional fields that engaged women—from the glamourous "Fly Girls" (female pilots) to the tedious war industry workers embodied in "Rosie the Riveter." One of the most recent works attempts to survey women in multiple branches of the military, Laurie Scrivener's US Military Women in World War II: The SPAR, WAC, WAVES, WASP, and Women Marines in US Government Publications. (Pergamon press, 1994). What this project contributes is a focus on women in the U.S. medical military in World War II with an analysis of how their medical military service impacted their post-war civilian careers. This research on medical military, particularly its role in enhancing professional opportunities for women, can in turn contribute to new work on military involvement in humanitarian initiatives and the creation of social capital.

Certainly, U.S. women did gain professional opportunities thanks to the outbreak of World War

II. "WOMEN HELD READY FOR TASKS OF WAR: They Have Proved Ability to Shoulder Military Medical Work," a headline reads in a 1942 Editorial Says[i]. In the previous year, on December 7, 1941, a two-hour bombing from Japanese fighter planes devastated Pearl Harbor and forced a then-neutral US to join the Allied powers. The Selective Training and Service Act of 1940 had already began boosting the US military manpower and required all males between 21 and 35 to register for the draft, but once our involvement in the global war was solidified, the age range for the draft expanded from 18 to 65 years-of-age. By the time our war involvement was declared, the US armed forces had 10 million troops ready to deploy to Europe and the Pacific to aid the Allies against the growing expansion of the Axis powers[ii]. With the male population being sent off to fight the Axis, women were presented with new economic opportunities that defied previous gender roles. With their male counterparts absent from the job market, women were able to occupy new, traditionally male-dominated careers in factories, welding, operating heavy machinery such as tractors, etc. Not only were women given new opportunities on the home front, but on May 15, 1942, Congress created the Women's Army Auxiliary Corps (WAAC) which allowed women to obtain military auxiliary jobs, however, without any actual military status. By appointing women to these auxiliary positions, the men who previously were in those same positions were now free to join the combat pool overseas. Even though Waacs were not given military benefits in the beginning of the creation of WAAC, these women would soon earn their military status on July 1, 1943 WAAC was discontinued and the Women's Army Corps (WAC) was approved[iii]. At this point in the war, not only were women responsible for managing the home front, but they were also looked upon to take roles in WAC if eligible.

But, there was another type of woman who had already established a place in the workforce before the male absence in the nation even began to take hold. These women belonged to the medical profession- they were dietitians, occupational therapists, physical therapists, nurses, and physicians. Especially with a death toll of over 72 million people, medical personnel were in high demand. The most popular way in which women in medical occupations served the demand of war was through the Army Nurse Corps. Each type of medical personnel, with its varying purposes, roles, and authoritative place in medicine had obstacles unique to their specific profession. While these obstacles posed a huge possible blockade in their career, women in these professions still managed to professionalize in their sub-fields. My research is focuses on the successes these women accomplished in their medical military careers, the formidable obstacles they suffered, and the impact of military service on their postwar civilian careers. My larger project will examine variables such as how race affects the rate of professionalization in the various

military medical sub-fields. Another expansion of my project will look at the rates of professionalization in female global counterparts.

Methodology

Public history methodology produces both the standard scholarly article appropriate for publication as well as a product appropriate for exhibition. To produce both, I am conducting research directly in archives as well as consulting online primary sources in databases and digitized collections in university libraries and museums. The primary collection that I am consulting are the Quigley papers housed at the AMEDD archive on the base at Fort Sam. This is the premier medical military archival collection in the US and has a deep commitment to female medical military professionals. The Quigley papers were donated only in 2012, so they are unprocessed. In fact, I am the first researcher to consult them, which makes my research automatically a contribution in the field. The Quigley collection includes not only her papers but also her artifacts.

I am also consulting the Personal Papers of other female military medical personnel, including Erma Meyers-Aaron (total of 6 boxes), and the Frieda Goodman Personal Papers (1 box). These latter collections will permit me to compare the experiences of other female personnel with that of my primary subject, Grace Sessenbach Quigley, to obtain a bigger insight on my primary focus.

The last major source of primary documentation necessary for this project is the historical New York Times database. I am drawing on this source in order to analyze popular perceptions and reportage on U.S. female medical army personnel. I argue that the press represents women in stereotypical female terms without acknowledging the mortality risk inherent in battlefront posts or disease exposure, nor their professionalism and health science training, nor their war contributions in terms of victory, liberation, or saving of soldiers' and civilians' lives. I further argue that while the press did not acknowledge women's overall contribution to the war, women's experiences during the war led to further professionalization of their medical careers postwar. The Public History component of this research will consist of two projects: a genealogy of Grace Sessenbach Quigley and a microdocumentary film showcasing key female medical military personnel whose papers are housed in the AMEDD. The genealogy requires access to the very expensive Ancestry.com premier collection, which includes military records, census records, birth and death records, and many other collections. Fortunately, the history department has just subscribed to this premier database, partly in support of my research. The film will become a part of the permanent historical film archive of the St. Mary's University History Department for use in secondary education and in college classrooms. I am also donating it to the AMEDD museum and to the AMEDD archive for whatever

purposes they deem it useful. Ideally, it will be posted on their website and also put on display in the museum.

Historical Overview of the Medical Sectors of the Military

Nursing

Throughout the history of nursing, major wars have sparked transitional periods for the profession. After the Civil War, the Women's Hospital of Pennsylvania became the first hospital that began offering standardized nursing classes and training. By 1893, three educational nursing programs were in operation located in Boston, New York, and Connecticut. By 1900, nursing schools were operating throughout all parts of the US numbering between 400 and 800 institutions. Nursing throughout history has been a female-dominated field, so much so, that in 1901, under the Army Reorganization Act, the Army Nurse Corps was created and only female nurses were eligible for recruitment in this branch, as it was apart of WAC. There had always been an acceptance of women in the nurturing occupation of nursing and there was a heavy attempt to recruit women to fulfill these spots in the military branch. During WWI in 1918, there were about 21,000 nurses in the Army Nurse Corps, whereas during WWII by 1945, there were 57,000. This sharp rise in the volume of nurses was a direct result of the combination of both government pleas for nurses to join the work field and the easy access there was to money to help pay for nursing school. In January of 1943, Paul V. McNutt, director of Defense Health and Welfare Services released an official statement explaining, "Sixty-five thousand young women must enter schools of nursing between June 30, 1943 and July 1, 1944 if even minimum civilian and military needs of the nation are to be met." This need for 65,000 nurses was an increase by 10,000 from the previous year's quota[iv]. Nursing was a woman's profession that came with a positive image which made it even more appealing for women to join. "For a long time to most Americans the Army or Navy nurse was just a pretty girl on a poster- dressed in white, wearing a becoming cape and a merciful expression. Now she is beginning to come alive… the public realizes suddenly that there are American women as well as men in the combat areas all over the world."[v] In Quigley's hometown of Bath, Pennsylvania, the newspapers boasted about her and her brother's simultaneous service in the Army. They applauded her for passing her nurse's exams and honored her mother for having both a son and daughter in service at the same time. In one of her scrapbook pages, Quigley kept an article boasting about the great work nurses have been doing in Italy- not only for US troops, but also for the natives of Italy. Another clipping in her scrapbook comes from a newspaper letter written by Private Hal Lister to an editor saying, "no one is sufficiently capable of praising those girls (nurses)… their valiant service is beyond literary description." While the WAAC only allowed women to carry out clerical and auxiliary jobs, the ANC allowed women to serve their country

overseas alongside their male counterparts. The opportunity for women nurses to serve overseas proved to be a harrowing experience, but also an enjoyable experience. In the Grace Quigley collection, her scrapbook contained an abundant number of photos of Italy, Algeria, and other destinations her service tour included- the Catacombe Cappuccini were among her favorite sites.

Specialist Corps- Dietitians, Occupational Therapists, Physical Therapists

Dietitians
During the Spanish-American war, women were tending to the sick and wounded and using diet for medicinal purposes. By providing a healthy and nutritious diet for the war-stricken soldiers, their health exponentially improved. The Medical Department of the military realized how important these women were and on May 11, 1917, under Executive Order, dietitians were granted admission to serve in the Medical Department as civilian employees for the duration of WWI. During WWI, dietitians had varying roles, with little structure to serve their actual purpose to the armed forces. However, during WWII, the profession of dietitians was much more structured, and because of their civilian status, they were granted greater autonomy in their profession to do what they saw fit.

Occupational Therapists and Physical Therapists
During WWI, Reconstruction Aides were trained using European

rehab methods that modeled modern physical therapy. The point of this physical reconstruction program was to bring wounded soldiers back to their full potentials physically and mentally. In 1918, the Surgeon General came out with an outline for physical therapy training that schools had to implement. Being a relatively new field in the medicinal world, trial and errors were, of course, made in the process. However by WWII, the field had become successful and specialized forms of treatment were created to expand the field's purpose to not only amputations, but also treatments for head injuries, peripheral nerve injuries, spinal cord injuries, thoracic injuries, vascular injuries. These specialists did not get the opportunities that nurses did to go overseas and perform these procedures and treatments. The whole-body treatments that emerged during WWII proved to be a great benefit for the physical therapy field as it was emerging as a new profession. The reconstruction program also included occupational therapists. While physical therapists handled the majority of physical reconstruction of patients, occupational therapists acted as reeducation therapists to the patients. Again, WWI proved to be a beta trial for this new field in medicine and WWII expanded it into what it is today. Dietitians, Occupational Therapists, and Physical Therapists were initially civilian workers for the military, but on January 3, 1947, these women were granted full status in the military and the Medical Specialists Corps was formed for these specific professions.
Physicians

Physicians

While nurses and female medical specialists enjoyed opportunities to work within the Medical Department, women physicians faced excruciating opposition. The New York Times was flooded with articles about women physicians fighting for a place in the military to serve. These women knew that they could not ask for a full opportunity, so they settled for seeking reserve opportunities as the reserve pool of physicians was severely drained. Women's arguments were that this country could not "afford to overlook this reservoir of professional skill because of outmoded prejudices long since discarded by other countries."[vi] As seen in Britain, women physicians were allowed to serve in the military and obtain full military status. The female physicians who wanted to serve did not serve with this country, but with the latter as a result of prejudice. WWII did not give female physicians a window for professionalization during the war. After the war ended, much progress was made for women in this profession.

Gender Constraints of the Time

Not only did women in the medical field have to succumb to prejudices within certain sectors of medicine, there were also general gender constraints of the time. There was a certain quota that set a limit on the number of women who could join the branches that were available for them to join, so naturally, with heavy influx of volunteers ready to serve their country, many were rejected. The interesting thing about these rejections are the statistics surrounding the grounds for their dismissal. In 1942, New York Times reported, "The Army also revised its figures as to the results of the physical examinations undergone by WAAC candidates. Through this, it was revealed that only 33 1-3 per cent of the group examined were rejected, instead of 50 per cent announced on Thursday by Colonel A.F. Cosby, chairman of the Second Corps Area Advisory Board."[vii] Of the 33 1-3%, 50% of those candidates were rejected because of mental illness while the other 50% were rejected because they did not meet the physical requirements to join. Mental illnesses included being "morons, imbeciles, and idiots," were words used to describe mental illnesses. Granted, male counterparts also were rejected for mental illnesses, but there were many more grounds for the basis of rejection for men- it was not split 50/50 as it was for their female counterparts. In order to combat their perceived physical shortcomings, women were required to attend schools that were implementing physical training programs mimicking those of military training. Girls would take, what was called, "toughening" classes such as wall-scaling.[viii] Beyond perceived mental and physical deficiencies, women were also perceived as non-patriotic, selfish, and lazy. Dr. George Baehr, chairman of the Medical Advisory Board of the Office of Civilian Defense made the statement that, the time had come for American women "who up to last Sunday were trying to find defense work that wouldn't interfere with their bridge and

matinees," to volunteer for nursing jobs just as dangerous as the first-line trenches."[ix] He's brutally implying that women wanted to help the cause of the war, but they wanted to do so on a normal schedule- one that wouldn't interfere too much with their recreational activities. Apparently, advertising work with normal hours was geared to attract the female audience as seen in a December 1941 New York Times editorial that highlighted the fact that the New York Chapter of the American Red Cross established normal hours for nurses aids to 8:45am to 2pm.[x] An important fact that the media and others overlooked was the fact that a requirement for being a nurses aide was working without pay, married or single. It would be extremely hard for a married woman to keep her home functioning if her husband were off fighting in another country and she were working without pay. The expectation for women to flock towards a nonpaying job was an irrational expectation. Their failure to enlist cannot be condemned as lack of patriotism nor industry.. A commentator in the same editorial said, "The women of this country haven't realized that these aides are to serve with the first-aid posts and that no kind of volunteer services as urgently needed in an emergency." The implication here, again, is that women are indifferent to serving their country and would rather volunteer for services that are less important. In order to show the benefits of being a nurse's aid, in 1943, the opening line of and editorial titled, "Nurse's Aide Helps Army Medical Officers in Giving

Physical Examinations to Waacs," "Still another use for the nurse's aide was found yesterday…"

nother way the New York Times contributed to the skewed image of women was by posting generally unflattering comments. For example, in March of 1942, they published a woman saying that she would love to serve in Hawaii if she got the chance to.[xi] This quote contributes to the perception that many women were joining the war's cause for glamorous reasons. This was an especially harmful image that the women in the auxiliary corps had to face. They were often perceived as being promiscuous, even being referred to as an "organized group of whores," that were in the military for the wrong reasons including to keep the soldiers morales up through sexual favors and for a possible glamorous life. While married women could serve in the forces, regulations made it extremely hard for them to do so. In November of 1942, a bill was passed that would raise the pay of only women without any dependents.[xii] While the government gave married women with dependents the opportunities to serve, it seems as though they tried their best to discourage them by making the salary inadequate to their minimal needs. .

One of the hardest obstacles women had to overcome was fighting to be interpreted as a "person" under the law. Women were not perceived as people within "Army circles." "Person" under the law popularly meant male person and that interpretation was used against them to often withhold deserved accomplishments. Major

Flikke, head of the Army Nurse Corps, was promoted to colonel but did not receive pay according to her new rank due to the male-only definition of "person."[xiii] Being perceived as an inferior sex reflects diminished value of women's military service.

Unique Obstacles of Women in the Medical Field

Being in a male-dominated environment where female counterparts working in the field was frowned upon, female physicians were especially at a disadvantage. Anita Brenner's article in the New York Times in 1942 captures the problem, "This argument boils down to something not new and not altogether medical. In many respects it has been familiar since woman turned her back on stove and tub to enter some occupation in direct competition with men. Women have become doctors, as they have entered other fields, as a direct result of the needs and changes brought by wars, and the dispute about their place in the general scheme has flared at times since 1848. It has died down in respect to many kinds of work, smothered by sheer weight of numbers, but into medicine, perhaps the most respected and certainly the most jealously guarded occupation, women have entered very slowly, fought at every step, so slowly that one of the first women doctors in America, Annie S. Daniel is in active practice still."[xiv] Prestigious specialties were wary of accepting any females into residencies, which is why most female doctors were physicians (a non-specialty MD). They were very successful in their

private practices, but they had to fight extremely hard to get the right to serve in the Army. They fought to be included in the reserves because pleas were being made to physicians as the reserve pool was drained. Even with the crucial need for physicians, female doctors were faced with the response, "That would be our last recourse, if all else fails."[xv] Women doctors, eager to serve their country with their needed assets were forced to join the British army where women physicians were gratefully accepted. Female physicians eventually got the right to serve in the US Army, but without rating. Because nurses in the Army were able to obtain full ratings, female physicians deemed this limitation as "undignified"[xvi] and the British medical services were still much more appealing for them. Especially in regards to nurses, they had to face the unique obstacles because of their work in combat zones in combination with an enormous numbers of wounded and dying soldiers who needed attention. Under normal conditions, these nurses were used to having 10 patients in their rounds; however, while they were overseas, the nurse to patient ratio was typically 1:150. One patient bed was actually used for 2 patients sometimes- the spring was covered with a blanket and used by one soldier and the mattress was placed on the floor for a second soldier to use. Medical supplies were limited and nurses had to be inhumanly resourceful by only administering rare commodities (fever reducers to those who were highly likely to survive and anesthetics to the ones who

absolutely needed it). Granted, these women knew the obstacles they would face going into dangerous war zones, but nonetheless, these risks were daunting. Quigley kept a newspaper article titled, "Nine Killed When German Bombs Hit Evac Hospitals," which announces the death of seven patients and two medical personnel on duty. Even through all of these impediments, women in the medical field (specifically nursing) were still viewed as naive and delicate. In the Quigley files, there was a letter written to her by John R. Campbell, Lt. and a striking line in the letter says, "I guess the age of chivalry is long past with the way they treat poor fragile little nurses…" In the weekly newsletter that circulated through the command, pinup girls appeared more frequently than female medical professionals. Quigley kept two newsletters featuring a huge picture of the bombshells, Linda Darnell and Sherry Britton, a galling image of what an ideal woman looked like.

Postwar Professionalization and Progress

While nursing was a demanding medical profession, 69% of Army nurses stated they would remain in the nursing profession after the war. An even higher percentage, 80%, of Navy nurses also continued their nursing careers postwar in civilian settings. For the remaining women who did not continue in their field, several factors deterred them. Marriage, family, and dissatisfaction towards civilian nursing jobs were among the reasons women did not go back to nursing once they were discharged from the military. Women had felt a sense of autonomy and initiative while serving as nurses in the military. They could not adjust to the hierarchy of civilian hospitals nor the difference in pay.

Others who did not completely drop their postwar career took an alternate route into Public Health. By 1940, every state had adopted a public health nursing program. The traditional tract of education began to require nurses obtain their Bachelor of Science in Nursing (BSN) which would not have put veteran nurses G.I. Bill funding to good use. This women were already experienced nurses and getting a BSN certification would not improve their knowledge much. Enrollment in public health programs increased as many veteran nurses wanted to continue their education and regain the self-governance they had once enjoyed in wartime circumstances and take it into their postwar careers[xvii]. WWI allowed for early stages of professionalization, while WWII, increased professionalization exponentially with clearer guidelines and regulations for all sectors of the medical field.

However, the greatest accomplishment for all the female medical personnel was the passage of the Women's Armed Services Integration Act on June 12, 1948 which granted all women the ability to join the military in "Regular" branches and as permanent members- this included female physicians, medical specialists, and nurses.

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Can an Elliptical Trainer be used as an Alternative to Field Test Method for Evaluating Cardiorespiratory Fitness?

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Introduction

Physical activity and fitness is a crucial aspect of everyday life. Having an adequate level of physical activity and physical fitness can help us carry out daily activities, take up physical challenges, and surpass physical expectations. Physical fitness plays a significant role in the lives of police officers, firefighters, and soldiers because of the amount of stress and physical demand that is associated with their jobs. Thus maintaining a training regime is essential throughout their career to complete their job to the best of their abilities (Soroka & Sawicki, 2014). Therefore, it is no surprise that many programs use physical fitness as a determinant for acceptance or continued assessment. For years United States Air Force has recognized the importance of physical fitness by implementing the Air Force Fitness Program that consists of a 1.5 mile run, 1-minute push-ups, 1-minute sit-ups, and abdominal circumference measurement (Weiglein, Herrick, Kirk, & Kirk, 2011). These physical activities are used to measure the participant's level of fitness and preparedness to successfully accomplish occupational tasks. However, the Air Force Fitness Program has implemented a change to one of the components because of medical reasons. These changes consist of substituting the 1.5-mile run with the Rockport Walk Test as an alternative cardiorespiratory fitness test for injured Airmen who are medically exempt from running (Weiglein et al., 2011). The Rockport Walk Test has already been implemented but has yet to be validated (Weiglein et al., 2011). The implementation of the Rockport Walk Test may not be suitable for all participants. Alternative field tests for cardiorespiratory fitness would benefit this program. The purpose of this study is to examine an elliptical trainer because it may provide an alternative field test method for cardiorespiratory fitness.

Defining Physical Activity, Physical Fitness, and Cardiorespiratory Fitness

Physical activity is any movement of the body that expends energy (Soroka & Sawicki, 2014). While physical fitness is the ability to perform daily physical activities without feeling fatigue (Ozen, Olcucu, Ozen, Dalli, & Sonmez, 2014), measurement of energy expenditure is frequently used when estimating physical activity via cardiorespiratory fitness (Schneller, Pedersen, Gupta, Aadahl, & Holtermann, 2015). Cardiorespiratory fitness is the ability to deliver and use oxygen under the demands of long intense exercise conditions (Plowman, 2003). Oxygen consumption (VO2) is the best indicator of cardiorespiratory fitness during a physical exercise test which can be

measured in its maximal (VO2 max) or submaximal form (VO2 peak) (Guixeres et al., 2014). VO2 max measures the highest rate of oxygen consumption during maximal physical exercise. Furthermore, it indicates the maximum capacity for the body to transport and utilize oxygen during intense physical exercise (Shete, Bute, & Deshmukh, 2014). The capacity to transport and use O2 during exercise is a key parameter that allows the efficiency of transfer of physiological work to mechanical movement (Chavanelle et al., 2014). Noteworthy, an athlete's aerobic capacity is important for having success in sports. An athlete's aerobic capacity is generally considered the best indicator of cardio respiratory endurance and athletic fitness (Shete et al., 2014). Metabolic analyzers, such as the Meta Max I, measure the O2 consumption to accurately be able to estimate energy expenditure (Medb, Mamen, & Resaland, 2012). Low levels of cardiorespiratory fitness is correlated with cardiorespiratory risks (Guixeres et al., 2014). Studies performed in adults and children have linked cardiorespiratory fitness and cardiorespiratory risks result in metabolic abnormalities such as diabetes (Guixeres et al., 2014). More importantly, low levels of cardiorespiratory fitness can result in low physical performance among government personnel in the field. Partaking in daily physical activity leads to a healthy lifestyle that is associated with a decreased risk of heart disease, obesity, and lower levels of stress (Shete et al., 2014). Physical activity is associated with a decrease in cardiorespiratory and all cause mortality. Evidence shows that there are positive effects of physical activity on mental health and health-related quality of life in healthy populations. Furthermore, physical activity is associated with increased levels of cardiorespiratory fitness, which is important to maintain a healthy lifestyle (Rastad,

Martin, & Åsenlöf, 2014). Field-testing involves physical activity and assesses physical fitness. Therefore, being physically active and fit is important to excel in daily activities and exercise tests. Cardiorespiratory fitness is an essential component in comparing various field tests. Specifically, comparing field tests involving elliptical trainers.

Importance of Field Testing

Exercise field tests provide reliable, responsive, and informative data about exercise capability (Brown & Wise, 2007). One of the many purposes of for field testing or fitness testing is to provide feedback that will lead to improved health and fitness (Wilkinson, Brown, Graser, & Pennington, 2012). Cardiopulmonary exercise testing is an effective form when assessing exercise capability of an individual. Noteworthy, exercise field tests require expensive lab equipment not available at many institutions or programs. For this reason whenever these field tests are implemented, they are commonly for assessing pulmonary risk assessment (Paisani et al., 2012). Therefore, field exercise tests such as the shuttle walk and stair climbing test are commonly used (Paisani et al., 2012). However, the Rockport Walk Test that has already been implemented in the Air Force Fitness Program has yet to be validated (Weiglein et al., 2011). Many programs have tried to substitute various exercise field test for medical reasons. Therefore, our study seeks to possibly use elliptical trainers to be a validated substitute for the 1.5-mile run that is currently implemented in many programs for assessment. After all, exercise field-testing is implemented as a means to assess physical fitness.

Elliptical Trainers vs. Exercise Activities

Elliptical trainers are widely available in fitness centers and health care settings. Elliptical trainers have risen in popularity as a result to try to improve

fitness. (Burnfield, Yu Shu, Buster, Taylor, & Nelson, 2011). The similarities in the movement patterns and muscle demands of elliptical training and walking suggests elliptical training could help people regain strength and flexibility (Burnfield et al., 2011). Elliptical trainers consist of a stance and swing phase that is characterized by the position the foot is in during the distinct phases. The fore foot remains planted in the pedal continuously throughout the elliptical motion, while the hind foot has a distinct stance and lift (Kaplan, Barak, Palmonovich, Nyska, & Witvrouw, 2014). One particular study evaluated and compared the referent average weight bearing values and weight bearing distribution percentages between four exercise activities: over ground walking, over ground jogging, treadmill jogging, and elliptical exercise. They found that elliptical exercise or elliptical trainers significantly reduces weight bearing in both the hind and fore foot as compared to the three other exercise activities. The cyclical movement results in significantly less average weight bearing values on all areas of the foot compared to the other three activities. The results indicate that elliptical exercise leads to relatively low weight-bearing and applied can be instituted following certain lower limb pathological conditions, surgical procedures, and where partial weight-bearing is permitted (Kaplan et al., 2014). Therefore, elliptical trainers could be used an alternative to field-testing.

Hypothesis/Purpose

The purpose of this study is to present a viable alternative to substitute for the 1.5 mile run. Alternative field tests for cardiorespiratory fitness would benefit the many programs. Performance on an elliptical trainer may provide an alternative field test method for cardiorespiratory fitness.

Aim 1: To test the reliability and accuracy of the elliptical

machines energy expenditure estimation.

Aim 2: To validate the energy expenditure (caloric cost) of various work rates (RPM X Resistance Setting) registered on the elliptical display against the energy expenditure measured using open circuit spirometer (Ultima® Metabolic Cart, Medical Graphics Corp).

Aim 3: To test the validity of a designed elliptical standard test compared to a 1.5 mile run.

Methods

Aim 1: Six subjects, 3 women and 3 men, volunteered to perform 3 separate exercise sessions on each of the two elliptical (Precor model EFX 556i and the Life Fitness model 95X) machines, order was randomized. During each session, subjects exercised on each elliptical at a step cadence of 70 per minute for 12 minutes; 2 minutes of warm-up at resistance of 3 followed by a 10 minute measurement period at a resistance level of 8. The calorie readout was recorded at regular intervals during each exercise and validated against recording of open circuit spirometer metabolic cart (MGC Ultima).

Aim 2: Twenty-one healthy volunteers between the ages of 21-62 years old (11 men & 10 women) performed 9 exercise bouts on the Life Fitness model 95X. Each bout involved a different combination of resistance and RPM. The RPM was set at 50, 60, or 70. Each exercise bout consisted of three 5-minute stages with the resistance set at 5, 10, or 15. To control for any ordering effect, the order of RPM assignments per session per group were distributed as shown in Table 1 (below). Open-circuit spirometer provided measurements of oxygen uptake (VO_2) and

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respiratory exchange ration (RER) throughout each bout and recorded every minute. Heart rate (HR) was measured using Polar® heart rate monitor every minute. The following measurements we recorded each

minute from the elliptical machine: RPM, resistance, kcal, and distance. Additionally Rating of Perceived Exertion (RPE) of each subject was recorded at midpoint and end of each 5-minute stage.

Table 1: Order of RPM assignments per session day per group

Group	RPM Order per Session		
	1	2	3
1	50	60	70
2	60	70	50
3	70	50	60
4	70	60	50
5	50	70	60
6	60	50	70

Aim 3: Twenty-one male and 21 female healthy volunteers completed an analysis of body composition using DEXA, a treadmill VO_{2max} test to measure maximal oxygen uptake and energy expenditure (Ultima® Metabolic Cart, Medical Graphics Corp), a Cooper 1.5 mile run for time on an outdoor track, and two exercise bouts using the standard elliptical test we developed on a Life Fitness model 95X. At least 48 hours separated the treadmill VO_{2max} test, the 1.5-mile run, and the two elliptical bouts. Prior to the 1.5-mile run, subjects were provided a standard warm-up and encouraged to complete the 1.5-mile course in the shortest time possible. Data assessed during the 1.5 mile run included HR (Polar® heart watch), distance, and elapsed time recorded each ½ mile. The elliptical tests protocol consisted of a standard whole-body warm-up routine performed just prior to the elliptical test, then a 1 minute warm-up on the elliptical

machine followed immediately by 12 minutes of exercise with RPM and intensity selected by the subject at an intensity effort perceived to match their effort of the 1.5 mile run. During the elliptical bouts, heart rate (Polar® heart watch), RPM, distance, and calories expended were recorded every minute from the elliptical readout. RPE was assessed every 3 minutes by verbal response from the subject. Participants were instructed to do the best they could during each elliptical exercise test. The goal was to expend as many Kcals as possible during the 12-minute elliptical bout. The first elliptical exercise bout was used as a practice session for participants to choose the resistance and RPM that they felt would maximize their achievement during the elliptical exercise test, and to familiarize them with the testing procedures. Data collected during the second elliptical bout completed at least 48 hours after the practice bout was used as the test criterion data.

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We estimated the energy output (Kcal) for the 1.5-mile run was estimated using the equation below (Loftin et al., 2010).

$$1.5 \text{ mile EE (kcals)} = 1.5*(\text{wt kg}*0.789-(\text{gender men} =1, \text{women} =2) *7.534+51.109$$

Results

Aim 1: Six subjects (3 women and 3 men) participated with an average age of 39 years old and average weight of 78.4 kg. There was no significant difference between HR during the 12-minute exercise session on either elliptical trainer. The Life Fitness (LF) elliptical trainer recorded a greater distance walked during the 12 minute walking bout compared to the Precor (PC) $(1.30 \pm 0.09$ vs. 1.09 ± 0.10 miles) the difference was found to be statistically significant. The total energy expenditure in

kcals (EE) for the LF was 2.54 kcals per 10 minutes (0.25 kcal/min) less than the Medical Graphics Ultima metabolic cart (MC) and the EE for the PC was 24.35 kcals per 10 minutes (2.44 kcals/min) more than the MC; both were significantly different compared to the MC. However, a 2.54 kcal or 0.25 kcals/min difference might not be considered a significant physiological difference, and thus it was determined to proceed to Aim 2 using just the Life Fitness 95X elliptical trainer.

Demographics of Study Participants

Sex	Number of Participant's	Age	Weight (KG)	Height
Male	3	42.33±20.01	91.47±8.66	70.83±1.04
Female	3	37.33±20.03	65.47±8.66	67.67±2.31

T-Test by Brand

Measure	Brand	Mean	P Value
HR (bpm)	LF	137.70 ± 16.62	
	PC	142.12 ± 18.38	0.09
% HR Max	LF	76.81 ± 10.18	
	PC	79.16 ± 10.38	0.10
Distance (miles)	LF	1.30 ± 0.09*	
	PC	1.09 ± 0.10*	0.01

Data are presented as mean ± Standard Deviation (SD)
*P< 0.05 distance is significantly different between LF and PC

T-Test between Brand and Met Cart EE

Brand	Elliptical (Kcal)	Met Cart (Kcal)	P Value
LF	91 ± 13.98*	93.54 ± 14.13*	0.024
PC	122.93 ± 12.74**	98.58 ± 12.68**	<0.0001

* Data are presented as mean ± SD
*Significant difference between LF Elliptical and Met Cart
** Significant difference between PC and Met Cart

Aim 2: This study had twenty-one healthy volunteers between the ages of 21-62 years old (11 men & 10 women) that combined resistance levels within a trial to produce 60 measurements of estimated total energy expenditure (EE) for the Life Fitness 95X elliptical trainer (LF) during the 15 minute exercise bouts at varying resistances and RPMs. When the LF was compared to the Medical Graphics Ultima metabolic cart (MC) measurement of total energy expenditure for the 60 data points, the results demonstrated a strong linear association (r = 0.829). On average the LF estimated total EE during the 15-minute exercise bout at 10.21 kcals or 0.68 kcals/min higher than the MC. This difference was statistically significant.

Demographics of Study Participants

Sex	Number of Participant's	Age	Weight (KG)	Height
Male	11	34.36±13.71	85.55±12.59	71.14±3.78
Female	10	31.4±9.25	66.91±7.27	66.25±3.78

Aim 3: Twenty-one male and 21 female healthy volunteers completed an analysis of body composition. The relationship between estimated total energy expenditure for 1.5 mile run and actual energy expenditure of the 12-minute exercise bout on the elliptical trainer was linear. Using the data collected from the validation conducted in Aim 2, we imputed values into a model to estimate the number of calories needed in order to pass the fitness test at the specified level. The established cut point (pass or fail) based on the Army's Civilian Police Program, minimum physical fitness standards, and the Cooper Institute administering standards are running 1.5 miles in 17.5 minutes. According to previous research (Loftin et al., 2010), weight and gender influence the amount of energy expended while completing a running/walking task, but speed of completion does not. That is, people burn the same number of calories in 1.5 miles whether they run or walk, but that number fluctuates depending on whether the person completing the task is male/female and by their overall weight. Because the elliptical task is 12 minutes in duration and includes a resistance to the exercise bout, we rescaled the number of calories needed to complete a 1.5-mile run to be in relation to a 12-minute elliptical task. We then added a constant to correct for lack of perfect calibration in the elliptical machine. This resulted in the

formula below that can be used to determine the number of calories needed in order to

meet the cut-off criterion within a 12-minute exercise bout on an elliptical trainer.

Demographics of Study Participants

Sex	Number of Participant's	Age	Height	Weight (KG)	Body Fat Percentage	VO2 Max
Male	21	30.19±7.28	71.62±3.44	86.03±16.10	21.73±9.21	45.57±10.05
Female	21	30.5210.62	66.86±2.52	67.91±17.07	27.57±8.19	39.58±7.50

Correlation between Met Cart and Elliptical Energy Expenditure (Kcals)

$y = 0.9945x + 0.891$
$R^2 = 0.8522$
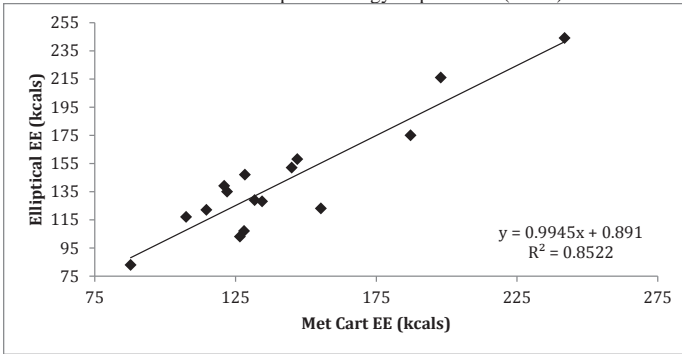
Total Energy Expenditure in 12 minutes needed to pass (kcals) = 0.95*(pass/fail KCAL) – 3.161

(Pass/Fail kcals) = ((1.5*(wt kg*0.789-(gender men =1, women =2) *7.534+51.109))/17.5)*12

Discussion

For many years the Federal Government Agency have used a 1.5-mile run to provide a measure of police officer's level of fitness and preparedness to successfully accomplish occupational tasks. However, members are often waived from the 1.5-mile run portion of the assessment due to medical reasons. Individuals waived from the run are required to participate in a timed 2-minute walk as an alternative to the 1.5-mile run. Other programs such as the Air Force Fitness Program have substituted the 1.5-mile run with the Rockport Walk Test as an alternative cardiorespiratory fitness test for injured Airmen who are medically exempt from running (Weiglein et al., 2011). The Rockport Walk Test has already been implemented but has yet to be validated (Weiglein et al., 2011). Alternative field tests for

cardiorespiratory fitness have also been implemented for the Navy's physical readiness program due to the unsuitable conditions for personnel (Parker, Griswold, & Vickers, 2006). Alternative field tests for cardiorespiratory fitness would benefit the Federal Government Agency physical readiness program. The results of this study showed that performance on an elliptical trainer may provide an alternative field test method for cardiorespiratory fitness that is validated and can easily be implemented. The similarities in the movement patterns and muscle demands of elliptical training and walking suggests elliptical training could help people regain strength and flexibility (Burnfield et al., 2011). We evaluated the accuracy and validity of the PRECOR model EFX 556i and Life Fitness model 95X elliptical trainer machines. We provide the general approach to the problem, findings, and raw data collected to support standards and procedures for administering a fitness test to police officers using a Life Fitness model 95X elliptical trainer machine as a viable alternative to substitute for the 1.5-mile run.

Conclusion

A 12-minute exercise bout on a Life Fitness model 95X can be used as a valid alternative of a 1.5-mile run when using the LF model 95x internal estimation of total energy expenditure and a estimation of a persons predicted energy expenditure of calories during a 1.5 mile walk/run (Loftin et al. 2010). Aim 1 showed that the Life Fitness elliptical trainer could accurately estimate energy expenditure to within 2.54 kcals during a 10-minute exercise bout. The Precor over estimated energy expenditure by 24.35 kcals thus further testing of the Precor elliptical trainer was not conducted. Aim 2 showed that the LF model 95x energy expenditure readout using various resistances and RPMs was linearly associated with accepted laboratory measures of energy expenditure and therefore a valid alternative for replacing the 1.5-mile run. Aim 2 determined that the LF model 95x energy expenditure values were consistently higher than the values obtained from the metabolic cart but only by 0.68 kcals/minute. This was found to be statistically significant but of negligible physiological difference. Aim 3 used the data collected from the previous two studies to design an elliptical trainer test that could be used as an alternative to the 1.5-mile run. The test was designed using predicted energy expenditure from a 1.5-mile walk/run and estimating the amount of calories needed to expend on an elliptical trainer to equal a 1.5 mile run time of 17 minute and 30 second. The elliptical test was design as a pass/fail test. If the subject does not expend the calculated amount of calories within the 12 minute time period they fail the test.

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Boys Like Boys and Girls Like Toys: Investigating Play Preferences in Beluga Whales

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As a significant developmental milestone, the nature of play can provide insight into the social, physical, and cognitive characteristics of individuals. Using archived video footage of a longitudinal study of captive belugas, the purpose of this research was to investigate sex and types of play, specifically object play. Fifteen adult and immature belugas were assessed for play behavior from the period of 13 to 18 months for six calves. The results indicated that sex was related to the category of play. Females preferred to play with objects, while males preferred to play socially. There was no difference in the classes of objects with which males and females played. Females preferred to play alone, while males preferred to play with other animals, but age influenced the types of play displayed by male and female belugas. These findings suggest that male and female belugas develop different play preferences during their second year of life.

While a frequent occurrence, especially for young conspecifics, the concept of play is one of the most difficult to study in animal behavior. Often easy to observe, the definition of play has been difficult to formalize. The most accepted and cited definition by Gordon Burghardt (1996) suggested that play was repetitive, without a clear function, performed in a relaxed setting, and developmentally important. Developmentally, play behavior has a number of proposed functions including creating novel experiences and practicing future survival skills. For example, in a longitudinal study of captive dolphins (*Tursiops truncatus*), immature and adult dolphins produced many novel play behaviors, primarily through an imitation mechanism (Kuczaj, Makecha, Trone, Paulos, & Ramos, 2006). The novel behaviors included interactions with unfamiliar objects, new behaviors with unfamiliar objects, and novel behaviors with familiar objects (Kuczaj et al., 2006), suggesting that novelty behaviors contribute to cognitive development. Not only does play allow for individuals to expand their creativity, but the development of survival skills are also often produced (e.g., foraging and defensive behaviors). When comparing play behavior in laboratory and wild rats, both types of rats performed similar play behavior. However, wild rats were found to perform more defensive acts (Himmler, Stryjek, Modlinska, Derksen, Pisula, & Pellis, 2013). These studies suggest that despite environment and species, play remains universal.

Types of Play

Locomotor play. While play behavior is defined as repetitive and seemingly purposeless, several categories of

play have been identified. Locomotor play is the exaggeration and repetitiveness of body movements while performing play behaviors (Burghart, 1996). In locomotor play, or commonly known as "motor play", animals create complex body motions such as jumping, wrestling, and thrashing. Along with domestic animals, this type of play has been noted in wild animals as well, such as juvenile Red-necked Wallabies (*Macropus rufogriseus)* and juvenile Red kangaroo (*Macropus rufus*) (Johnson, 1987; Russell, 1973).

Social play

Social play involves two or more individuals that are directing play behavior towards each other (Bekoff & Allen, 1998). One important characteristic of social play includes communication. Without communication, the animals engaged in the behavior could misinterpret the action for violence and actual fighting could occur. To prevent fighting, play signals are used to communicate between the participants. These signals inform the other individual that a particular action is play and reduce the likelihood of actual fighting behavior (Bekoff, 1975, 1998). For example, coyotes display play bows to initiate or continue a play bout (Bekoff, 1977). One aspect of social play is the rough and tumble play between participants in which motor play is integrated with social play. Specifically, rough and tumble play may include playful aspects of aggressive and dominant behaviors between two individuals (Siviy, Baliko, & Bowers, 1996). In regards to human children, rough and tumble play is performed as a bonding mechanism between fathers and sons (Flanders, Simard, Paquette, Parent, Vitaro, Pihl, & Séguin, 2010).

Object play

Finally, object play is the manipulation of inanimate objects (e.g., environmental enriched devices – EEDs) for the purpose of enjoyment. Object play is repetitive and usually occurs in a low-stress environment. This type of play is also common in domestic animals, such as cats, but has been observed in wild animals such as gorillas and octopuses (Hall, Bradshaw, & Robinson, 2002; Kuba, Byrne, & Meisel, 2006; Tanner & Byrne, 2009). Upholding one of the aspects of general play, object play mimics functional behaviors such as foraging or aggression. For example, domestic adult cats appear to practice predatory behaviors on non-prey objects that are present (e.g., attacking ball of yarn like a mouse; Hall et al., 2002).

Play in Dolphins

While play has been observed in many cetacean species, the behavior has been empirically studied most often with dolphins. Like other species of animals, play in dolphins is "multifaceted" and is an essential characteristic for development (Kuzcaj & Eskelinen, 2014). Dolphins of all ages play, but age is an important factor in influencing dolphins to play. When comparing juvenile play to adult play, younger animals are more likely to engage in play behaviors. As young dolphins mature, their preferences for playmates change. When dolphins are young, they often prefer to engage in play with a playmate that is similar in age. However, the preference for a "similar playmate" transitions into a playmate who is significantly older than the dolphin that has reached the juvenile stage of development (Greene, Melillo-Sweeting, & Dudzinsksi, 2011).

Like other animals, dolphin play is categorized very similarly. Locomotor play occurs when dolphins perform "aerial behaviors" such as high jumps, leaps, and rapidly-changing moving body positions. Social play, occurring in both adults and

calves, includes play fighting, foraging with a partner, and also imitation of another dolphin (Kuzcaj & Eskelinen, 2014). When performing social behaviors with a younger conspecific, adult dolphins may induce self-handicapping to encourage the interaction (Kuzcaj & Esklinen, 2014).

Dolphins are notorious for playing with anything provided. Object play has been documented in both captive and wild dolphins. These objects include buoy balls, pool cleaning supplies, ropes, bubbles, fish, and more (Kuczaj & Eskelinen, 2014). When comparing object play behavior between captive and wild dolphins, there was no difference between the two (Greene et al., 2011). However, there was a difference between the likelihood of mutual and solo object play in both sexes of captive and wild dolphins. Captive male dolphins were more likely to engage in solo object play than their wild relatives. On the other hand, female wild dolphins were more likely to engage in solo object play than wild male dolphins.

Play in Belugas

Unlike dolphins, little research has been conducted regarding beluga whales (*Delphinaterus leucas*) and their behaviors. However, existing research has provided insight on beluga calves and their first year of life. First, recent research has indicated that immature beluga calves initiate solitary behaviors as early as one month, which is much earlier than bottlenose dolphin calves (Hill, 2009; Hill, Campbell, Dalton, & Osborn, 2013). These behaviors included frequent solo swims and interactions with other belugas.

Like dolphins, belugas exhibit all three types of play. Immature belugas are also more likely to engage in play than adult belugas, much like dolphins (Hill & Ramirez, 2014). As compared to social play and locomotor play, object play behaviors

were more likely to be exhibited by belugas. Object play behaviors usually included the manipulation of EEDs, water, and other inanimate objects (e.g., gate and leaves). In addition, sex differences were observed. Similar to dolphins, male belugas have been indicated to display a preference for motor play more than female belugas. Females, on the other hand, have been indicated to display a preference for object play (Hill & Ramirez, 2014).

Present Research

The purpose of the study was to investigate play behavior during the first year and a half of captive beluga calves with an emphasis on object play. To address this purpose a collection of archived video recordings of six beluga calves and their companions was event-sampled for all bouts of play between 13 and 18 months. Video recordings were coded for all bouts of play examining the type of play, type of object, frequency, and duration. The primary questions examined in this study included:

1. Does calf sex relate to the type of play behavior?
2. Does calf sex relate to type of play object?
3. Does calf sex determine with what objects are played?
4. Does sex influence the length of different types of play bouts?
5. Does calf sex influence the partner?
6. Do calves prefer specific partners when they play?
7. Does calf age influence the type of play performed?

Method

Subjects

The subjects of the study consisted of seven beluga calves: OLI, GRA, QIN, BEL, ATL, SAM, and STE. OLI was born June 23, 2007 and his mother was TIN. GRA was born three days later on June 26, 2007 to MAR. QIN was born July 31, 2008

to SIK. On June 12, 2009, BEL was born to CRI. ATL was born on June 23, 2010. SAM was born July 9, 2013 to LUN. The subjects were housed at Sea World San Antonio (SWSA) where they were provided food, socialization with other cetaceans, and environmental-enriching devices (EEDs, toys). Between the ages of six to nine months, the calves received their first toy. Each toy was categorized as either supervised or unsupervised. For example, toys that would be swallowed or potentially harmful to the belugas were supervised.

Sample

Archived video recordings containing all play bouts were selected for the study. Twelve video recordings in which play bouts were present were chosen so that each calf had a total of 12 video recordings, two video recordings per month through the 13th to 18th month of life. Video recordings were made using either a focal follow (15 min duration) or a scan sample (20 min duration) recording rule. Focal follow video recordings primarily follow a mother-calf pair but also record companion animals in the pool depending on the angle of recording and field of view. Scan sample techniques record the behavior of all animals within a social grouping at one-minute intervals and capture significant events like play bouts. Out of 72 total videos, 97% were recorded using a focal follow technique, which enables an entire play bout to be measured from initiation to termination.

Measures

While the primary play behavior of interest was object play, all bouts of play were recorded. A play bout is a set of play events that is initiated by a single animal, performed contiguously until the initiating animal leaves and performs a different behavior (Hill & Ramirez, 2014). These play bouts were considered independent and categorized as object play, motor play, or social play. If the behavior was categorized as object play, then the object involved in the bout was recorded as well. Social behaviors such as socio-sexual behavior were also included in the categorization of social play. Definitions for each type of play are summarized in Table 1.

Procedure

Each video was coded for frequency and duration of play bouts. The initiating animal, sequence of actions, start and end times, type of play, and type of object, if manipulated, were also recorded. All data were managed with an excel sheet and then imported into IBM SPSS Statistics 19©. A chi-square test of independence was conducted to evaluate the relationship between sex of animal playing and a number of variables associated with play. An independent t-test was performed to evaluate the effect of age on the length of play bouts. A one-way ANOVA was conducted to determine if type of play had different durations.

Table 1

Types of Play

Categories	Definitions
Types of Play	
Object Play	Manipulation of inanimate objects, could be either environmentally provided or human-provided (buoy balls, straps, rings, gates, feathers, etc.)
Locomotor Play	High-energy, exaggerated behaviors (fast swims, body slaps, vertical swims, spin swims, etc.)
Social Play	Play behaviors between at least two individuals; behavior is intended for the other individual (chases, contact-to-contact games such as mouth-to-mouth or melon-to-melon)

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Results

General Descriptive

There were a total of 419 play bouts that occurred in the 1,092 minutes/18.2 hours of video footage. Of the 419 play bouts, object play ($n = 171$) represented 40.6% of the play bouts, social play ($n = 128$) represented 30.5%, and motor play ($n = 120$) represented 28.6%. A chi-square goodness of fit test indicated the belugas engaged in object play more frequently than the other categories of play, $\chi^2(2, N = 419) = 10.77$, $p < .005$. Out of object play 58 of the bouts involved water play, 16 bouts included gate play, and 171 included play with EEDs. Among the 72 sessions, 19 contained EEDs with the EEDs unequally represented across sessions. The buoy ball ($n = 43$) represented 41.8% of the object play bouts, the strap ($n = 28$) represented 27.1%, buoy ring ($n = 10$) represented 9.7%, a flat plastic disk with attached straps ($n = 12$) represented 11.6%, a hula-hoop ($n = 8$) represented 7.7%, and a helmet ($n = 2$) 1.9%.

The results of a one-way ANOVA indicated that the type of play significantly affected the duration of the bout, $F(2,416) = 20.36$, $p < .001$. Dunnet T3 post hoc test indicated that all three types of play were significantly different from one another, $p < .05$ (Figure 1). The belugas engaged in object play ($M = 19.13$, $SEM = 1.79$) significantly longer on average than both social play ($M = 13.72$, $SEM = 1.20$) and motor play ($M = 6.08$, $SEM = 0.70$). Social play was significantly longer than motor play.
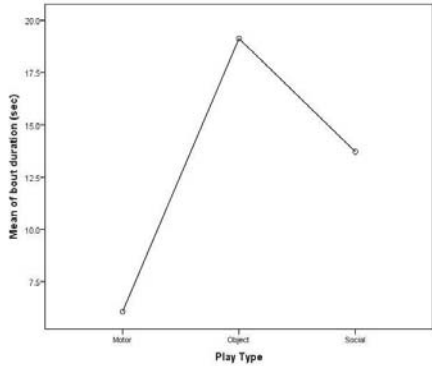

Figure 1. Type of play and duration of the bout (seconds).

Sex by Type of Play

A chi square test of independence was conducted to test the relationship between sex and type of play. The results indicated that a significant relationship existed between sex and type of play, $\chi^2(2, N = 419) = 18.21$, $p < .001$, $V = .21$. The female belugas ($n = 104$, 49.1%) were more likely to engage in object play. In contrast, the male belugas ($n = 82$, 39.6%) were more likely to engage in social play. Motor play was equally likely for both males ($n = 58$, 28.0%) and females ($n = 62$, 29.2%).

Sex and Type of Object

There was no significant relationship between sex and the type of object with which belugas played. There were a total of

102 play bouts that involved EEDs. The females ($n = 52$) engaged in 55.7% of the EED-involved play bouts. The males ($n = 59$) engaged in 61.4% of EED-involved play bouts. Fifty-eight play bouts involved water play behaviors. Females ($n = 37$, 34.9%) and males ($n = 21$, 30%) performed water play at similar levels. Sixteen play bouts involving a gate were also recorded. Both sexes performed these play behavior relatively equally, with males ($n = 6$, 8.6%) engaging in play involving a gate and females ($n = 10$, 9.4%).

Sex and Type of EED

A chi square test of independence was conducted to test the relationship between sex and type of EED. Females ($n = 16$, 43.2%) were more likely to perform play behaviors with the strap when compared to other EEDs. Males ($n = 12$, 27.5%) were more likely to engage in play behaviors with plastic flat disk with attached straps. The buoy ball were played with the most frequently ($n = 43$, 41.7%) and equally among males and females.

Sex and Duration of Play Bouts

Three individual t-tests were conducted to test the relationship between sex and bout duration for the different types of play. The results of the t-test concerning motor play indicated that there was a sex difference between length of motor play bouts, $t(73.82) = 2.61$, $p = .011$. Males ($n = 58$, $M = 17.54$, $SEM = 2.67$) engaged in motor play longer than females ($n = 62$, $M = 20.15$, $SEM = 2.39$). There was no sex difference for length of object play bouts. Males ($n = 58$, $M = 7.95$, $SEM = 1.30$) engaged in similar object play bout duration, on average, as the females ($n = 104$, $M = 20.15$, $SEM = 2.39$). There was also no sex difference for the length of social play bouts. Males ($n = 82$, $M = 13.37$, $SEM = 1.31$) displayed social play bouts about as long as

female social play bouts ($n = 46$, $M = 14.35$, $SEM = 2.4$).

Sex and Partner

A chi square test of independence indicated calves have preferences for individual partners, c, that was not sex dependent, chi-square test of independence, not significant. Males partnered with males during 45% ($n = 40$) of play bouts. Males partnered with females 55% ($n = 49$) of play bouts. Females partnered with females 49% of play bouts ($n = 29$). Females partnered with males 51% ($n = 30$).

Preferred partners. STE displayed preferences for CRI ($n = 4$), her mother and SAM ($n = 5$), her same-aged half brother. SAM displayed preferences for OLI ($n = 4$), a 7-year-old related male and STE ($n = 4$). ATL displayed preferences for BEL ($n = 2$), an unrelated 2-year-old female, and OLI ($n = 1$), a 4-year-old related male. BEL displayed preferences for GRA ($n = 8$), a 3-year-old unrelated male, and QIN ($n = 1$), a 2-year-old unrelated female. QIN displayed preferences for BEL ($n = 12$), a 4 month-old unrelated female, OLI ($n = 6$) and GRA ($n = 6$) that were unrelated 2-year-old males, and SIK ($n = 2$), her mother. GRA displayed preferences for OLI ($n = 8$), his same-aged half-brother, and QIN ($n = 11$), a 4-month-old unrelated female. OLI displayed preferences for GRA ($n = 8$), QIN ($n = 9$) when OLI was 2-years-old and QIN was 4-months-old, and SAM ($n = 11$) when OLI was 7-years-old and SAM was a year-old.

Effect of Age Class on Play

Age class by play type. A chi square test of independence was conducted to test the relationship between age class and type of play. The results indicated that a significant relationship existed between age class and type of play, $\chi^2 (2, N = 419) = 18.21$, $p < .001$, V = .21. The female belugas ($n = 104$, 49.1%) were more likely to engage in object play. In contrast, the

male belugas ($n = 82$, 39.6%) were more likely to engage in social play. Motor play was equally likely for both males ($n = 58$, 28.0%) and females ($n = 62$, 29.2%).

Age class by sex by play type. Two chi-squares of independence tests were conducted to examine the relationship between immature belugas ($n = 370$) and adult belugas ($n = 49$) and play type. Immature female belugas ($n = 68$, 40.5%) were more likely to engage in object play behaviors than immature male belugas ($n = 67$, 33.2%). In contrast, immature male belugas ($n = 77$, 38.1%) were more likely to engage in social play than immature female belugas ($n = 42$, 25.0%). Motor play was equally represented for both immature males and immature females, $\chi^2 (2, N = 370)$ =7.24, $p < .027$, V = .14. Adults also showed similar relationships between age class, sex, and play type, $\chi^2 (2, N = 49)$ =24.75, $p < .001$, V = .71. Adult female belugas ($n = 36$, 81.8%) were more likely to engage in object play than adult male belugas ($n = 0$, 0%). Similar to immature males, adult males ($n = 5$, 100.0%) were also more likely to engage in social play than adult female belugas ($n = 0$, 0%). Motor play between both adult sexes was also relatively equal.

Duration of age class. A t-test was conducted to determine the relationship between age class and duration of play bouts. There was no significant difference between age class and duration of play bouts. The average play bouts for immature belugas ($n = 370$) lasted 13.23 seconds ($SEM = .893$) while the average play bouts for adult belugas ($n = 49$) lasted 17.53 seconds ($SEM = 3.265$).

Age and duration for different play bouts. Three t-tests were conducted individually to investigate the relationship between age and the duration for each type of play bout (Figure 2). For object play bouts, there was not a significant difference

between immature belugas ($n = 135$, $M = 19.28$, $SEM = 2.03$) and adults ($n = 36$, $M = 18.56$, $SEM = 3.80$). There was also not a significant difference between age class and the length of social play bouts. Immature belugas ($n = 119$, $M = 13.27$, $SEM = 1.09$) engaged in social play with similar durations as adult belugas ($n = 9$, $M = 19.67$, $SEM = 9.07$). There was also no significant difference between age class for the length of motor play. Immature belugas ($n = 119$, $M = 6.15$, $SEM = 0.714$) and adult belugas ($n = 4$, $M = 4.00$, $SEM = 2. 67$) engaged in motor play bouts that were similar in length.
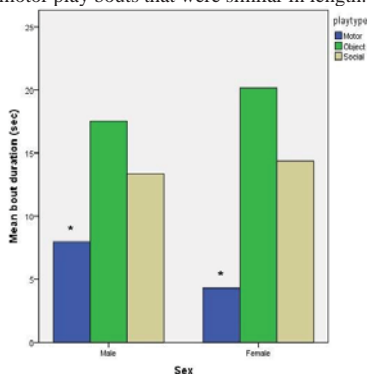

Figure 2. Sex and duration of play bout. *indicated a significant difference between age class.

Discussion

Play, which is displayed by almost every species studied, is a significant indicator of developmental progress. As a difficult concept to define, limited research on play and its development in cetaceans currently exists. For example, the first year of life for beluga calves is typically composed of mother-calf swims, but calf-initiated behaviors independent behaviors do emerge during this developmental period

(Hill, 2009; Hill et al., 2013). The purpose of the study was to investigate the influence of sex and age in type of play behavior (includes object, social, and motor play), type of play object (EED, water, gate), type of human-provided object (EED), length of play bout, and partner preference (both individual and sex class) in captive belugas. The data originated from archived video recordings of focal follows of six calves and their mothers and companion belugas. The calves ranged in age from 13 months to 18 months, however all visible play bouts were coded.

Type of Play

General results. Naturally, the belugas engaged in all three types of play as expected. Similar to dolphins, the results of the study indicated that female belugas were more likely to engage in object play, while male belugas were more likely to engage in social play (Greene et al., 2011). In regards to sex and type of play, it can be indicated that males are more likely to perform social-motor play behaviors such as rough and tumble play. The study also indicated that sex did not influence partner preferences. In fact, partner preferences were found to vary in age among all play partners. This outcome could be related to personality, such as dolphins (Kuzcaj & Eskelinen, 2014). When determining a play partner, dolphins tended to interact with bolder individuals than cautious individuals. However, age may also be an important factor for both the partner preference and the bout duration. Consistent with Hill and Ramirez (2014), immature belugas were more likely to have longer play bouts than adult belugas. The cause for such behaviors could be related to the emerging complexity of play behaviors as immature animals begin to age (Kuzcaj & Eskelinen, 2014). As play behaviors increase in complexity, the longer the animal will be engaged.

Object play. Overall, the belugas engaged in object play more than social play or motor play. Object play included play with human-provided toys (EEDs), gates, and water. Behaviors such as gate-rubbing and water manipulation, such as bubble rings, water spits, and bubble streams were observed much like with previous studies involving dolphins (Kuczaj & Eskelinen, 2014). However, the belugas clearly preferred to play with EEDs when they were present, which was about 20% of the observation sessions coded. The belugas interacted with several different types of EEDs, such as a buoy ball, a large car-wash strap that simulated seaweed or kelp, a plastic-disk with straps attached, a hula-hoop, and a helmet. The females played most frequently with buoy ball and straps. As observed in a previous case study, female belugas have been seen carrying objects on their bodies and wrapping objects around their pectoral fins and flukes (Killborn, 1994). In contrast, the males played most frequently with the buoy ball and plastic flat disk with attached straps, pushing and carrying both items on their melons and bodies. Unfortunately, not every beluga experienced each type of EED equally so it is difficult to draw any clear conclusions. Developmentally, the current study suggested that object play has begun to fully emerge during the second year of life, thus supporting the early, but sporadic, object play observed during the first year of life of captive belugas (Hill, 2009; Hill et al., 2013).

Social play. While females appeared to prefer object play over other types of play, males engaged in more social play. Social play generally included behaviors such as chasing, play fighting as indicated by mouthing and swimming fast towards each other, and socio-sexual behaviors. To distinguish these interactions from their

functional and more intense contexts, the belugas generally repeated the interactions multiple times in a bout, exchanged roles, and never engaged in behaviors that produced a terminating behavior. One type of social behavior that occurred at higher frequencies during the first part of the second year of life as compared to the first year of life was the appearance of rough-and-tumble play. In other mammals such as humans and rats, males will display fighting like behavior that involves extensive physical efforts and reciprocal interactions with other males (Flanders et al., 2010; Himmler et al., 2013). Similarly, the male beluga calves displayed head thrashes, chases, mouth-to-mouth, tug-a-wars and physical maneuvers that were reciprocated by a partner. However, the belugas did not seem to limit these rough and tumble interactions to other males as female calves also participated. It is possible that some of these behaviors may overlap with socio-sexual behaviors, usually displayed by the male belugas and included hip thrusts, genital rubs, and presentation of the genitalia. Social play by dolphin calves is recognized as an important factor for future dolphin behavioral and social development. By interacting with a range of individuals, members of these social species are able to recognize individuals, emotional states of others, and communication efforts (Bekoff & Byers, 1981). Failure to grow in these developmental aspects can cause miscommunication between other species members (Kuczaj & Makecha, 2008). Clearly, belugas also benefit from appropriate social interactions and much more research is necessary to better understand the role of sex in the different types of social interactions.

Motor play. While often rigorous, the engagement in motor play allows for a calf to practice useful skills necessary for survival (Mann & Smuts, 1999). However, despite their captive status, the belugas still engaged in a similar amount of motor play bouts with no difference between males and females. Beluga motor play included exaggerated movements such as fast swims, ventral swims, spin swims, sliding on slide outs, and a variety of body slaps. In a specific type of motor play, rough and tumble play typically involves males more than females. In humans, rough and tumble play is used as a bonding method between fathers and sons (Flanders et al., 2010). The performance of rough and tumble play could indicate a bonding method between beluga male calves.

Limitations

The results of this study need to be interpreted with caution. Due to the small sample size, not all play behaviors were equally present in the sessions selected. Additionally, not every animal in the beluga grouping was equally represented due to the focal follow recording procedure utilized to collect the data originally. For example, OLI, one of the earliest calves born to this population, appeared more frequently than younger animals, such as SAM, due to OLI's continued presence in the population as he aged. In addition, the time frame of the study was limited to the first six months of the second year of life, which may have led to limitations of types of play observed for both immature and adult belugas. With regards to object play, it is likely the unequal distribution of EEDs caused some objects to be represented more frequently than others (e.g., buoy ball vs. hula hoop) and therefore limits the interpretation of any sex differences or individual preferences observed. Despite the limited availability of EEDs (20% of the sessions), they still comprised the bulk of the belugas' object play.

Future Research

The results of the study suggest that a variety of play preferences develop during the second year of life. While studies regarding the first year of life for belugas have been conducted, there is a significant lack of research on the second-year of life (Hill 2009; Hill et al. 2013). Although socio-sexual behaviors have been noted to emerge in the first year of life in beluga calves, additional research should be conducted to investigate their possible developmental functions. As stated earlier, rough and tumble play and socio-sexual interactions in males may have overlapped due to their similarities. In order to understand this overlap, additional research should be conducted on the rough and tumble play and its relationship to socio-sexual interactions, as it seems to be critical components of beluga development.

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