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Machismo and Marianismo Revisited: Language, Acculturation, and Gender Role Perceptions Among Latinos

Analia Albuja

Dr. Sherri Palmer, *Research Supervisor*

While gender roles within the U.S. Latino culture have often been labeled as “machismo” and “marianismo” (Arciniega, Anderson, Tovar-Blank & Tracey, 2008; Castillo, Perez, Castillo & Ghosheh, 2010), research suggests that attitudes regarding these roles vary significantly depending on the amount of time Latinos spend in the United States (Su, Richardson & Wang, 2010). The purpose of this study was to gain a greater understanding of the heterogeneity within Latino American culture by determining some of the factors that identify subpopulations that do not adhere to the traditional gender role dichotomy of machismo and marianismo. The gender role perceptions of 46 Latino adults were measured via Castillo’s Marianismo Beliefs Scale (2010) and Spence and Helmerich’s Attitudes Toward Women Scale (1978), which were presented in both English and Spanish. Participants’ language usage (Spanish, English, or both) was measured by which survey they chose (English or Spanish) and by a self-report on the usage of each language. Acculturation was also measured with self-reports of language use, socialization, and entertainment. As predicted, Latinos who are more acculturated were found to have more liberal attitudes toward women, $r = -0.403$, $p < .01$ and to express less support of marianismo beliefs, $r = 0.480$, $p < .01$. Furthermore, participants who reported high usage of English demonstrated more egalitarian attitudes towards women, $r = -0.433$, $p < .01$ and less adherence to traditional marianismo beliefs, $r = 0.578$, $p < .001$. These results have implications for practices in psychology, public health, and education.

Introduction

Gender roles are social in nature. They are intimately connected with culture and have shown to be dynamic, changing both across time and between cultures (Khalid, 2011). In the dominant culture of the United States, gender roles have become increasingly egalitarian since the 1970s (Phinney & Flores, 2002). For example, there is greater approval of women working outside the home. On the other hand, gender roles within the Latino culture in the US continue to be more traditional (Phinney & Flores, 2002). These traditional roles have been explored in the fields of psychology, anthropology and sociology alike and are most often described by two

terms: machismo and marianismo.

Machismo describes the attitudes and behaviors that are expected of Latino men. However, the true meaning of the term has been muddled by its usage in popular culture. Today the word is primarily associated with negative qualities such as hyper-masculinity, chauvinism, and dominance (Arciniega, Anderson, Tovar-Blank, & Tracey, 2008). Even psychological literature has often presented only the negative aspects of machismo, emphasizing its possible connection with violence, as well as its adverse effects on sexual behaviors and excessive drinking (e.g., Erlanger, 1979; Ingoldsby, 1991; Mosher & Tomkins, 1988; Neff, 2001). As a result, many of the scales developed to quantify machismo only attempt to measure these negative traits, completely disregarding any positive aspects. However, recently there has been an effort to view machismo as a multifaceted psychological construct (Arciniega et al., 2008; Casas, Wagenheim, Banchemo, & Mendoza-Romero, 1994; Mirandé, 1997; Torres, Solberg, & Carlstrom, 2002).

This more nuanced view of machismo includes two main components. One, known as traditional machismo, embodies the negative traits discussed, including aggression, hypermasculinity, and dominance. The other side of machismo, as it is beginning to be understood today, is known as caballerismo. Caballerismo is used to describe gentlemanly characteristics, such as being respectful and noble yet humble (Arciniega et al., 2008). Although not a direct translation, the terms “knight” or “gentleman” are synonymous in English. Caballerismo represents the positive traits of machismo, such as “nurturance, protection of the family and its honor, dignity, wisdom, hard work, responsibility, spirituality, and emotional connectedness” (Arciniega et al., 2008, p. 20). This holistic understanding goes beyond negative stereotypes and attempts to better represent the construct that is known as machismo.

While machismo is used to describe Latino men, marianismo dictates the gender roles expected of Latina women. Similarly to the construct of machismo, marianismo has both positive and negative aspects. Marianismo, first identified by Stevens (1973), is influenced both by the Roman Catholic Church and by the Latino values of familismo, respeto, and simpatía (Castillo, Perez, Castillo, & Ghosheh, 2010; Fernandez-Esquer, Diamond, & Atkinson, 2010). The term is named after the Virgin Mary, so it is not surprising that the Church’s influence on Latina gender roles comes from its doctrine honoring Mary as humble and pious. By contrast, familismo, respeto, and simpatía are not directly influenced by religion, but rather are values that characterize Latino culture.

Each value emphasizes a separate aspect of culture, but together the three values help shape the construct of marianismo. First, familismo emphasizes close nuclear and extended family relationships and values childbearing “as an integral part of family life and the feminine gender role” (Raffaelli & Ontai, 2004, p. 288). Therefore, women complying with marianismo roles are expected to adhere to familismo by bearing and raising children, doing housework, and providing emotional support for their families. Second is the cultural value of respeto. Respeto emphasizes the importance of giving due respect according to the familial hierarchy. This hierarchy is determined by both age and gender, with elders and men having the most power. Respeto also extends outside of the home, as it calls for family members to uphold the family honor within the larger community (Castillo & Cano, 2007). This value influences marianismo

by expecting women to be modest, sexually pure, and subordinate and obedient to their husbands (Castillo et al., 2010). Lastly, *simpatía* is a cultural script that calls for empathy with others and promotes behavior that will avoid rude arguments. Therefore, unless a counter argument can be posed respectfully and with tact, it should be avoided in order to maintain peace and harmony in relationships (Castillo et al., 2010; Triandis, Marín, Lisansky, & Betancourt, 1984). These three values, *familismo*, *respeto*, and *simpatía*, are characteristic of Latino culture and directly influence the expectations associated with *marianismo*. As was seen with *machismo*, *marianismo* is also multifaceted and has influenced scholarly interpretations of Latino gender roles in the United States.

Although there is some existing literature on *marianismo*, much of the research on Latino gender roles has focused on men and the prevalence of *machismo* attitudes, making research that focuses specifically on Latinas limited (Kane, 2000). Within a sample of published studies that very broadly address gender and women, Eagly, Eaton, Rose, Riger, & McHugh (2012) found a limited number of studies that also included race or ethnicity in their research. Furthermore, research on Latinas has underestimated the impact of immigration and socioeconomic factors on the Latino family, leading to a simplistic representation of Latinas' role within their families and larger community (Andrade, 1982).

Nonetheless, the feminist wave of the 1960s through the 1980s saw a wave of interest in research on Latinas in the field of psychology. As Vazquez-Nuttall, Romero-Garcia, & De Leon (1987) noted in their literature review, studies completed in the 1980s showed the influence of acculturation, education, and English fluency on Latinas' perceptions of gender roles. The results of these studies suggest that the more acculturated, educated, and proficient in English a woman is, the less likely she is to adhere to strict gender role divisions (Espin & Warner, 1982; Kranau, Green, & Valencia-Weber, 1982; Rosario, 1982; Soto & Shaver, 1982). However, the findings from these four studies are limited because participants included women drawn largely from college-age populations. Moreover, of those participants who were not college students, most were from New York City, thereby representing only members of a large metropolis. Kranau et al. (1982) expanded the geographical representation of their sample to include the South and the Midwest, but this was the only study found to do so. Furthermore, Espin and Warner (1982) found English fluency to be a significant variable affecting gender role perceptions, but they administered their gender role scale only in English. The authors urged future researchers to eliminate this limitation by utilizing measures in both Spanish and English.

Such studies focusing on Latinas led to a new scholarly interest in their role within the family. As research on gender roles within the Latino family proliferated, findings called into question the assumption that Latinos adhere to traditional gender role divisions. For example, Cromwell and Ruiz (1979) explored decision-making patterns within Latino families and found that most often decisions were made jointly between the husband and wife. This indicates that males do not always dominate, as *machismo* would suggest. Similarly, researchers found that "egalitarianism is the predominant conjugal role arrangement in Chicano families," and that a woman's employment is a very good predictor of egalitarian roles (Ybarra, 1982, p. 177). These findings indicate diversity in adherence to *machismo* and *marianismo*, demonstrating that the terms may

range from very descriptive to irrelevant (Castillo & Cano, 2007; Castillo et al., 2010).

More recent research has found that as Latina mothers see their possible selves in their daughters, they open the opportunity to transcend the oppression of strict gender roles and give their daughters the chances they never had (Ayala, 2006). Additionally, data from a national sample have shown that generational status is predictive of more egalitarian gender role attitudes among Latinos, with third generation Latinos being the least adherent to strict gender roles (Su, Richardson, & Wang, 2010). These findings challenge the generally accepted assumptions of Latino gender roles, illustrating the diversity within the Latino community and, specifically, the existence of subpopulations within it.

Research on subpopulations in minority groups has revealed several indicators of these subgroups. One key indicator is level of acculturation. The field of anthropology defined acculturation very early on as the change that occurs when different cultures come into close contact with each other (Redfield, Linton, & Herskovits, 1936). However, more recent psychological studies have expanded this definition to involve two main dimensions: level of involvement in the new society and retention of the culture of the country of origin (Phinney & Flores, 2002). As expected, acculturation is more pronounced when the country of origin has drastically different cultural beliefs than the new country. Among Latinos, increased usage of English is considered evidence of involvement in the new culture and therefore language spoken is often used as a measure of acculturation (Leaper & Valin, 1996; Phinney & Flores, 2002; Vega & Gil, 1993).

With regards to gender roles, research has shown that as Latinos acculturate, they become more egalitarian in their views of these roles (Rosario, 1982; Su et al., 2010; Tharp, Meadow, Lennhoff, & Satterfield, 1968). Increased contact with the more liberal gender role perceptions of the dominant US culture can replace or modify the traditional Latino beliefs over time. This differentiation among attitudes within the culture creates subcultures that are not necessarily represented by the common interpretation of gender role perceptions (Kane, 2000; Steward, 1956). As acculturation has been shown to alter the gender role perceptions of Latinos, and because language has served as an indicator of acculturation, the present study will examine whether language and acculturation can serve to identify Latino subgroups that vary in their gender role perceptions.

The possible implications of this research are many. The influence of gender roles and acculturation among Latinos has been of interest to both the field of psychology and other fields, such as public health and education. Within the realm of psychology, research on gender roles and acculturation has been applied to clinical work and community interventions alike. Counselors working with Latino clients are encouraged to consider the impact of “reliance on traditional gender roles in the formation of self-identity” and the impact of these beliefs on relationships (Cofresí, 2002; Frevert & Miranda, 1998, p. 305). Similarly, community psychologists have explored the relationship of acculturation and Latino gender roles with respect to problem behaviors such as drinking or drug use. Kulis, Marsiglia, & Hurdle (2003) found aspects of traditional Latino gender roles, such as submissive femininity, to be protective factors against drug use by Latino youth.

Outside of psychology, Latino gender roles are of interest to public health

workers for several reasons, including physical and sexual health. Researchers have found marianismo beliefs to have a negative impact on the physical activity of Latinas when also associated with acculturation stress and cultural conflict (D'Alonzo, 2012). However, it is recommended that the positive aspects of marianismo, which place the woman as the center of the family, be emphasized in community interventions aimed to improve physical health. Because the women are central to family unity, they "are ideal candidates to serve as role models for physically active lifestyles" (D'Alonzo, 2012, p. 131). With regards to sexual health, low levels of acculturation and strong adherence to machismo and marianismo have been found to be predictors of particular sexual behaviors. While less acculturated Latinas tend to have fewer sexual partners than highly acculturated Latinas, the opposite is true for Latinos (Van Oss Marin, Gomez, & Hearst, 1993; Wood & Price, 1997). In this case, the women are upholding the values of purity and faithfulness promoted by marianismo, while the men are similarly fulfilling the machismo role of dominance and power. In this instance, it is recommended that community health workers emphasize the positive aspects of machismo, such as the role of protector, to encourage safer sexual behavior (Wood & Price, 1997). Moreover, the field of education has also been interested in the role machismo, marianismo, and acculturation play in the lives of Latino students. For instance, Latina students who hold egalitarian gender role beliefs were found to demonstrate higher self-efficacy with regards to career exploration (Gushue & Whitson, 2006). Therefore, these factors are important in identifying students who require greater assistance in realistic self-appraisal and planning for attainable educational and vocational goals.

The applications of this research are varied and extend beyond the field of psychology. Across disciplines, the study of acculturation and gender role beliefs is used to better understand the Latino community and to identify subgroups. This understanding is important in order to provide culturally-specific services, whether it be in counseling, health, or education. For these reasons, the hypothesis that higher usage of English will be correlated with more egalitarian perceptions of gender roles was tested. Furthermore, the present study also tested the hypothesis that more acculturated individuals will have more egalitarian gender role perceptions. Lastly, the strength of the relationship between acculturation and language use was also examined.

Method

Participants

The participants were 46 self-identified Latino adults (26 male, 20 female) from one suburban and three rural cities in eastern Missouri. The participants were recruited from Mexican restaurants, a church, and a university campus in these cities because of proximity and therefore make up a non-probability convenience sample. Ages ranged from 18 to 65 ($M = 35.82$, $SD = 13.11$) and the sample was predominantly Catholic (see Table 2). A total of 30 participants chose to complete the questionnaire in Spanish, and 16 completed it in English. The amount of time spent in the United States ranged from 3 months to 35 years ($M = 13.17$, $SD = 8.54$). Nineteen of the

participants were born in Mexico, five were born in the US, and the remaining 22 were born in other Latin American countries (see Table 1).

Measures

Gender role perceptions were measured using two different scales: Spence and Helmreich's (1978) Attitudes Toward Women Scale (AWS; 15 items; see Appendices A and B) and Castillo's (2010) Marianismo Beliefs Scale (MBS; 24 items; see Appendices C and D). Demographic information, including age, gender, religion, education level, country of origin, and length of time spent in the US, was also collected from participants. The demographic questions and gender role scales were translated into Spanish by the researcher, and the translations were proofread by a native Spanish speaker and by a university Spanish professor.

Attitudes Toward Women Scale. This study utilized the 15-item version of the AWS (Spence & Helmreich, 1978). Since the measure was first published, it has been used in over 300 published articles and was revalidated in 1997 because of concerns that the measure was outdated (Spence & Hahn, 1997). Furthermore, many studies continue to use the AWS, including studies as recent as 2011 (e.g., Joohee, Jinseok, & Hyunsung, 2010; Meyer & Mitchell, 2011; Parks & Robertson, 2004). Moreover, although researchers may be concerned about the appropriateness of using the AWS with an ethnic population, a 2013 study examining the reliability of four popular sexist beliefs instruments found that the AWS is reliable to use with Latino populations in the US (Hayes & Swim, 2013). Lastly, Spence and Hahn (1997) urged future researchers to be cautious about a possible ceiling effect occurring with the AWS. The ceiling effect refers to scores being skewed so as to be disproportionately high, losing valuable variability. However, in the present study the responses were normally distributed and no ceiling effect was present (see Results).

The present study commenced with the original 15-item version of the AWS, but one item was eliminated by the researcher because of confusion from the participants about the meaning of the sentence. The study was then completed with only 14 items on the scale. The scale was scored using a 4-point Likert-type scale, with (0) *agree strongly* and (3) *disagree strongly*. The score from each item was summed, allowing the total to possibly range from 0 to 42 points. Higher scores represented more egalitarian attitudes towards women.

Marianismo Beliefs Scale. Despite the confirmed reliability of the AWS among Latinos, the MBS was also included because it is a more culturally-specific measure of gender role perceptions. The MBS is much more recent than the AWS, possibly rendering it more relevant. However, it is also less established than the AWS because it has not yet been widely used in research. The scale's 24 items make up five subscales that measure specific aspects of marianismo. The subscales focus on the expectations of women in separate aspects of life, including family pillar (five items), virtuous and chaste (five items), subordinate to others (five items), silencing self to maintain harmony (six items), and spiritual pillar (three items). The scale was scored using a 4-point Likert-type scale, ranging from (1) *strongly disagree* to (4) *strongly agree*, and scores from the 24 items were averaged. Thus, scores could possibly range from 1 to 4, with high scores indicating stronger adherence to marianismo beliefs. This scale was used after receiving the author's permission on February 20, 2013 via email.

Acculturation measure. Acculturation was measured by a set of four questions on the demographic questionnaire. The first two questions addressed the ethnicity of the participant's friends, and spouse, cohabitating partner, or roommate. These questions were scored on a scale with (2) *Hispanic/Latino*, (0) *other/live alone*, and (-2) *non-Hispanic/Latino*. The remaining two questions asked about the language of entertainment including television, news, books, and magazines. Similarly, these questions were scored using a scale with (2) *Spanish*, (0) *other/equal amounts of Spanish and English*, and (-2) *English*. The scores on the four items were summed, creating a possible range of -8 to 8, with high positive scores showing low levels of acculturation, and low negative scores indicating high levels of acculturation.

Language score. A language score was determined based on which language the participant completed the packet in, and the response to two particular questions. The questions asked about primary language spoken in the participant's personal and professional life. These items were scored similarly to the acculturation items, with (2) *only Spanish*, (1) *mostly Spanish, some English*, (0) *both Spanish and English equally*, (-1) *mostly English, some Spanish*, and (-2) *only English*. Additionally, the language in which the survey was completed was scored with (2) *English*, and (-2) *Spanish*. The scores were summed, giving a possible range of -6 to 6. Positive scores demonstrate a high usage of Spanish, while negative scores indicate a high usage of English.

Procedure

Approval for the present research was obtained through the Institutional Review Board at Truman State University. Packets containing an informed consent document (see Appendices E and F), a demographic questionnaire (see Appendices G and H), the AWS, and the MBS, were administered by the researcher in either Mexican restaurants, homes, on a university campus, or in a church. Participants were offered the packet in either Spanish or English and chose their preferred language. Participants signed and separated the consent form from the packet to secure anonymity. All forms were numbered in order to confirm that each packet had a corresponding consent form, but they were kept separately. Participants completed the packet in the presence of the researcher and needed 15 minutes on average to complete the surveys.

Results

Acculturation

Acculturation was found to be significantly correlated with both AWS scores, $r(44) = -0.403$, $p < .01$ and MBS scores, $r(44) = 0.480$, $p < .01$. Because a low negative score shows a high level of acculturation, the negative correlation between acculturation and AWS indicates that more acculturated individuals were likely to have more liberal attitudes toward women. On the other hand, the positive correlation between acculturation and MBS indicates that participants who reported lower acculturation levels were more likely to report a strong adherence to traditional marianismo beliefs.

Acculturation was also significantly correlated with education level, $r(43) = -0.512$,

$p < .01$, language score, $r(44) = 0.811$, $p < .001$, and amount of time spent in the US, $r(43) = -0.530$, $p < .001$ (see Table 1). The correlation with education was negative, indicating that low levels of acculturation were associated with lower reports of education. Acculturation was positively correlated with language use, meaning that those who reported a greater usage of Spanish showed less acculturation. This supports the previous literature that found language use to be a predictor of acculturation (Phinney & Flores, 2002). Lastly, acculturation was negatively correlated with amount of time spent in the US. As expected, participants who have spent a shorter amount of time in the US showed to be less acculturated based on the measure used.

Gender Role Perceptions

AWS scores were significantly correlated with education, $r(43) = 0.634$, $p < .001$, language use, $r(44) = -0.433$, $p < .01$, and time spent in the US, $r(43) = 0.409$, $p < .01$ (see Table 1). The correlation with education was positive, showing that participants who reported higher levels of education were more liberal in their attitudes toward women. The negative correlation with language indicates that those who reported a high usage of English responded more liberally on the AWS. Lastly, the positive correlation with time spent in the US demonstrates that those participants who had spent longer amounts of time in the country had more liberal responses.

Similarly, significant correlations were also found between MBS scores and education level, $r(43) = -0.580$, $p < .001$ and language use, $r(44) = 0.578$, $p < .01$ (see Table 1). However, MBS scores were not significantly correlated with time spent in the US. The negative correlation with education level is indicative of a lower belief in traditional marianismo among participants who reported higher education. With language use, MBS scores were positively correlated, suggesting that those participants who reported a high usage of Spanish also showed a greater adherence to marianismo beliefs.

Lastly, it is important to note that scores on the MBS and the AWS were significantly correlated to each other, $r(44) = -0.611$, $p < .001$. This could suggest that the two measures are quantifying similar things. However, AWS is significantly correlated with time spent in the US, but MBS is not. The presence of one correlation but the lack of another adds a greater degree of complexity to understanding possible differences between the measures.

Despite Spence and Hahn's (1997) caution regarding a possible ceiling effect with the AWS score, there was no evidence of this problem with the data in this study. The Anderson-Darling test for normality was performed, and results suggest that the sample is normally distributed, $A(46) = 0.362$, $p = .430$.

A significant difference was found between the AWS scores of those participants who completed the questionnaire in Spanish and those who completed it in English, $t(39) = 2.53$, $p < .05$. Similarly, a significant difference was found between the MBS scores of the Spanish questionnaires and the English questionnaires, $t(43) = -4.25$, $p < .000$. Furthermore, when the larger MBS score was *divided* into its five component subscales, significant differences were found between the Spanish and English questionnaires for the following subscales: subordinate to others, $t(43) = -3.69$, $p < .01$, silencing self to maintain harmony, $t(43) = -4.57$, $p < .000$, and spiritual pillar, $t(39) = -4.19$, $p < .000$ (see Table 3).

Discussion

As predicted, self-reports of high English usage were correlated with more egalitarian perceptions of gender roles. In other words, those participants who reported using English more than Spanish in their personal and professional lives tended to also report more liberal gender role attitudes. In addition, participants' scores representing high acculturation were significantly correlated with more liberal attitudes towards women and with less support of marianismo beliefs, as hypothesized. Lastly, a significant relationship was found between acculturation and language use, such that those participants who reported greater amounts of English usage also scored higher on the acculturation measure.

Although no *a priori* hypothesis was made, a significant difference was found between the AWS scores of participants who completed the questionnaire in Spanish and those who completed it in English. This provides support for the validity of using language as an indicator of Latino subgroups, as clear differences in gender role beliefs can be identified solely by language use. This is further supported by the significant difference between the overall MBS scores of the Spanish questionnaires and the English questionnaires. Furthermore, this difference can be analyzed more deeply by examining the scores for each MBS subscale. Significant differences were found between Spanish questionnaires and English questionnaires for three of the five subscales (Subordinate to Others, Silencing Self to Maintain Harmony, and Spiritual Pillar). This provides insight into which aspects of traditional marianismo beliefs are highly culturally specific and which are shared by those who may not be as ingrained in the Latino community. Those participants who completed the questionnaire in English were significantly more liberal in their gender role beliefs on the subscales mentioned, but there was no difference between Spanish and English questionnaires for the remaining two subscales (Family Pillar and Virtuous and Chaste). This suggests that although they remain a central part of marianismo beliefs, family and chastity are also highly valued by more liberal Latinos who may dismiss the other central tenets of marianismo.

Gender roles within the Latino community, commonly referred to as machismo and marianismo, have been understood to have strict divisions between genders. However, this understanding may be an overgeneralization that discredits a tremendous amount of diversity. The purpose of the present study was to pursue a greater understanding of the heterogeneity within Latino culture by determining some of the factors that identify subpopulations that do not adhere to this dichotomy of gender roles.

These findings suggest that diversity does exist within the Latino community, and traditional gender beliefs are not as prevalent as stereotypes may suggest. Heterogeneity is detected by the variability seen in several demographic variables, such as amount of time spent in the US and level of education attained. More importantly, heterogeneity is found because the extent to which marianismo beliefs are supported by Latinos varies tremendously. These findings support the previous literature which suggested that Latino gender roles are multifaceted and adherence to these roles varies within the community (Casas et al., 1994; Castillo & Cano, 2007; Castillo et al., 2010).

This study makes a unique contribution to the existing psychological literature in identifying factors that are indicative of Latino subgroups that maintain traditional

gender role perceptions. Primary language use (Spanish or English) and level of acculturation are both factors that can be used to identify groups that are more likely to have certain gender role beliefs. Furthermore, because language was significantly correlated with acculturation, differentiation between Spanish and English usage can be an effective measure to include in acculturation scales. Lastly, the findings of this study contribute to the existing literature by including both men and women as participants. Moreover, the Midwestern setting and the wide age range of participants helps expand existing research.

The implications of these results are of importance to researchers and practitioners in the fields of psychology, public health, and education. An understanding of these factors helps improve the experiences of Latinos as their psychologists, health workers, and educators can practice with a greater cultural awareness. For instance, counseling services may be much more effective if they come from a practitioner who is aware of and understands the cultural paradigm present in the client (Cofresí, 2002). The fields of public health and education can similarly utilize cultural awareness to better educate professionals about the cultural background of their Latino clients, resulting in much more effective services and improved outcomes.

This study is not without limitations. A significant relationship was observed between education level and language use, as well as between education level and acculturation score. Because of these relationships, the effect of acculturation and language use alone on gender role attitudes is unclear. Moreover, the relatively small number of participants did not allow for great variation in language use scores. Therefore, the results were bi-modal, but with uneven magnitudes. This limited the statistical power necessary for more complex analyses such as linear regressions. Future research should recruit more participants in order to attain a sample with greater diversity in regards to education, religion, language use, and acculturation. This will allow for statistical analyses that may identify the role of education as compared to acculturation and language use. Furthermore, the reading level of some participants appeared to be lower than anticipated, so it is possible that these participants did not fully understand some of the questions. Therefore future research should use surveys that are more accessible to the varying educational levels of the population. Another possible limitation is the failure of this study to use an established acculturation measure. The present study used several questions as a proxy for an acculturation scale, but an acculturation measure designed for and validated with Latinos in the United States may be a more reliable measure that can provide greater clarity on the relationships between variables.

This study examined the relationships between acculturation and gender role perceptions of Spanish speaking and English speaking Latinos. The data indicated that higher self-reported levels of acculturation are associated with more egalitarian gender role beliefs. Similarly, higher self-reported use of English was correlated with more liberal perceptions of gender roles. Therefore, acculturation and language use may serve as indicators of Latino subgroups that differ in their gender role beliefs. Those who maintain strong adherence to traditional machismo and marianismo roles may require cultural understanding from their psychologists, health worker, and/or educators.

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Table 1. Sample Demographics

	Spanish questionnaire (n = 30)	English questionnaire (n = 16)
Gender		
Female	10	10
Male	20	6
Education		
High school or less	23	3
At least some college	6	13
Country of origin		
Mexico	16	3
United States and Puerto Rico	1	6
South America	3	7
Central America	10	0
Religion		
Catholic	24	11
Protestant	4	1
Atheist	1	0
No response	1	4

Table 2. Correlation Analysis of Gender Role Perceptions and Demographic Factors

	Acculturation Score	Education Level	Language Score	Time Spent	AWS Score
Education Level	-0.512***				
Language Score	0.811***	-0.490**			
Time Spent	-0.530***	0.363*	-0.517***		
AWS Score	-0.403**	0.634***	-0.433**	0.409**	
MBS Score	0.480**	-0.580***	0.578***	-0.212	-0.611***

Note. Higher MBS score represents traditional gender role perceptions; higher AWS score represents liberal gender role perception; higher acculturation score represents low levels of acculturation; positive language score represents Spanish usage; negative language score represents English usage.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3. Mean Scores of Subscales of Marianismo Beliefs Scale

	English		Spanish		t	df
	Mean	SD	Mean	SD		
Family Pillar	3.13	0.46	3.36	0.72	-1.37	42
Virtuous and Chaste	2.74	0.69	3.04	0.74	-1.37	32
Subordinate to Others	1.48	0.53	2.26	0.88	-3.69*	43
Silencing Self to Maintain Harmony	1.35	0.39	2.19	0.87	-4.57**	43
Spiritual Pillar	2.05	0.65	3.00	0.88	-4.19**	39

Note. * $p < .01$. ** $p < .001$.

Appendix A

Attitudes Toward Women Scale (Spence & Helmreich, 1978)

Instructions: The statements listed below describe attitudes toward the roles of women in society which different people have. There are no right or wrong answers, only opinions. You are asked to express your feelings about each statement by indicating whether you (A) agree strongly, (B) agree mildly, (C) disagree mildly, or (D) disagree strongly.

1. Swearing and obscenity are more repulsive in the speech of a woman than a man.
- 2.* Under modern economic conditions with women being active outside the home, men should share in household tasks such as washing dishes and doing laundry.
- 3.* It is insulting to women to have the “obey” clause remain in the marriage service.
- 4.* A woman should be free as a man to propose marriage.
5. Women should worry less about their rights and more about becoming good wives and mothers.
- 6.* Women should assume their rightful place in business and all the professions along with men.
7. A woman should not expect to go to exactly the same places or to have quite the same freedom of action as a man.
8. It is ridiculous for a woman to run a locomotive and for a man to darn socks.
9. The intellectual leadership of a community should be largely in the hands of men.
- 10.* Women should be given equal opportunity with men for apprenticeship in the various trades.
- 11.* Women earning as much as their dates should bear equally the expense when they go out together.
12. Sons in a family should be given more encouragement to go to college than daughters
13. In general, the father should have greater authority than the mother in the bringing up of the children.
15. There are many jobs in which men should be given preference over women in being hired or promoted.

In scoring items, A=0, B=1, C=2, D=3 except for the items with an asterisk where the scale is reversed. A high score indicates a pro-feminist, egalitarian attitude, while a low score indicates a traditional, conservative attitude.

Appendix B

Actitudes Hacia las Mujeres (Traducida de Spence & Helmreich, 1978)

Instrucciones: Las afirmaciones que siguen describen actitudes que la gente tiene sobre la posición de mujeres en la sociedad. No hay respuestas correctas o incorrectas, solo hay opiniones. Se le pide que indique su opinión sobre cada oración entre las opciones (A) totalmente de acuerdo, (B) moderadamente de acuerdo, (C) moderadamente en desacuerdo, o (D) totalmente en desacuerdo.

- | | A | B | C | D |
|-----|--|-----------------------------|--------------------------------|-----------------------------|
| | Totalmente
de Acuerdo | Moderadamente
de Acuerdo | Moderadamente
en Desacuerdo | Totalmente
en Desacuerdo |
| 1. | Decir palabrotas y obscenidades es más repulsivo en la conversación de una mujer que en la de un hombre. | | | |
| 2. | Dada la situación económica actual y la actividad de las mujeres fuera del hogar, los hombres deben ayudar con los quehaceres domésticos, como lavar los platos y lavar la ropa. | | | |
| 3. | Es un insulto a las mujeres mantener en las promesas matrimoniales la de “obedecer”. | | | |
| 4. | La mujer debe tener la misma libertad que el hombre para proponer matrimonio. | | | |
| 5. | Las mujeres deben preocuparse menos por sus derechos y más por ser buenas esposas y madres. | | | |
| 6. | Las mujeres deben ocupar igual que los hombres el lugar al que tienen derecho en los negocios y en todas las profesiones. | | | |
| 7. | Una mujer no debe esperar ir a los mismos lugares o tener exactamente la misma libertad de acción que un hombre. | | | |
| 8. | Es ridículo que una mujer maneje un tren y que un hombre cosa medias. | | | |
| 9. | El liderazgo intelectual de una comunidad debe ser la responsabilidad de los hombres. | | | |
| 10. | Las mujeres deben recibir las mismas oportunidades que los hombres para aprender diferentes oficios. | | | |
| 11. | Las mujeres que ganan igual que sus novios deben compartir los gastos en partes iguales cuando salen juntos. | | | |
| 12. | Los hijos de una familia deben recibir más apoyo que las hijas para ir a la universidad. | | | |
| 13. | En general el padre debe tener más autoridad que la madre en la crianza de los hijos. | | | |
| 14. | La libertad económica y social les vale mucho más a las mujeres que aceptar la feminidad ideal inventada por los hombres. | | | |
| 15. | Hay muchos trabajos en los cuales los hombres deben tener preferencia sobre las mujeres al contratar o promover. | | | |

Appendix C

Marianismo Beliefs Scale

Instructions: The statements below represent some of the different expectations for Latinas. For each statement, please mark the answer that best describes what you believe rather than what you were taught or what you actually practice.

A Latina . . .	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
1.) must be a source of strength for her family.	☐	☐	☐	☐
2.) is considered the main source of strength of her family.	☐	☐	☐	☐
3.) mother must keep the family unified.	☐	☐	☐	☐
4.) should teach her children to be loyal to the family.	☐	☐	☐	☐
5.) should do things that make her family happy.	☐	☐	☐	☐
6.) should (should have) remain(ed) a virgin until marriage.	☐	☐	☐	☐
7.) should wait until after marriage to have children.	☐	☐	☐	☐
8.) should be pure.	☐	☐	☐	☐
9.) should adopt the values taught by her religion.	☐	☐	☐	☐
10.) should be faithful to her partner.	☐	☐	☐	☐
11.) should satisfy her partner's sexual needs without argument.	☐	☐	☐	☐
12.) should not speak out against men.	☐	☐	☐	☐
13.) should respect men's opinions even when she does not agree.	☐	☐	☐	☐
14.) should avoid saying no to people.	☐	☐	☐	☐
15.) should do anything a male in the family asks her to do.	☐	☐	☐	☐
16.) should not discuss birth control.	☐	☐	☐	☐
17.) should not express her needs to her partner.	☐	☐	☐	☐
18.) should feel guilty about telling people what she needs.	☐	☐	☐	☐
19.) should not talk about sex.	☐	☐	☐	☐
20.) should be forgiving in all aspects.	☐	☐	☐	☐
21.) should always be agreeable to men's decisions.	☐	☐	☐	☐
22.) should be the spiritual leader of the family.	☐	☐	☐	☐
23.) is responsible for taking family to religious services.	☐	☐	☐	☐
24.) is responsible for the spiritual growth of the family.	☐	☐	☐	☐

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Appendix D

Marianismo Beliefs Scale

Instrucciones: Las declaraciones abajo representan algunas de las diversas expectativas para Latinas. Para cada declaración, por favor marque la respuesta que describe mejor lo que usted cre mas bien qué lo que le enseñaron o lo que usted practica realmente.

Una Latina . . .	Fuertemente No De Acuerdo 1	No De Acuerdo 2	De Acuerdo 3	Fuertement e De Acuerdo 4
1.) debería de ser una fuente de fortaleza para la familia.	☐	☐	☐	☐
2.) es considerada la fuente principal de fuerza para su familia.	☐	☐	☐	☐
3.) madre debería de mantener a su familia unida.	☐	☐	☐	☐
4.) debería de enseñarles a su niños ser leales a su familia.	☐	☐	☐	☐
5.) debería de hacer cosas que hagan feliz a su familia.	☐	☐	☐	☐
6.) debería (hubiera) permanecer/permanecido virgen hasta el matrimonio.	☐	☐	☐	☐
7.) debe de esperar hasta después del matrimonio para tener hijos.	☐	☐	☐	☐
8.) debería de ser pura.	☐	☐	☐	☐
9.) debería de adoptar los valores inculcados por su religión.	☐	☐	☐	☐
10.) debería serle fiel a mi pareja.	☐	☐	☐	☐
11.) debería satisfacer las necesidades sexuales de mi pareja sin quejarme.	☐	☐	☐	☐
12.) no debería alzar su voz contra los hombres.	☐	☐	☐	☐
13.) debería respetar las opiniones de los hombres aunque no esté de acuerdo.	☐	☐	☐	☐
14.) debe de evitar decirles "no" a la gente.	☐	☐	☐	☐
15.) debería hacer cualquier cosa que le pida un hombre de la familia.	☐	☐	☐	☐
16.) no debe de hablar de métodos anticonceptivos.	☐	☐	☐	☐
17.) no debe expresar sus necesidades a su pareja.	☐	☐	☐	☐
18.) debe de sentirse culpable por decirle a la gente sus necesidades.	☐	☐	☐	☐
19.) no debe de hablar del sexo.	☐	☐	☐	☐
20.) debe perdonar en todos aspectos.	☐	☐	☐	☐
21.) siempre debería estar de acuerdo con las decisiones de los hombres.	☐	☐	☐	☐
22.) debería de ser el líder espiritual de la familia.	☐	☐	☐	☐
23.) es responsable de llevar a su familia a servicios religiosos.	☐	☐	☐	☐
24.) es responsable del crecimiento espiritual de su familia.	☐	☐	☐	☐

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Appendix E

INFORMED CONSENT DOCUMENT

Project Title: The Effect of Language Spoken on Gender Role Perceptions among Latinos in the United States

Principal Investigator: Analia Albuja, undergraduate student of psychology at Truman State University and Dr. Sherri Palmer, psychology department

WHAT IS THE PURPOSE OF THIS STUDY?

You are being invited to take part in a research study designed to investigate the relationship between language primarily spoken, Spanish or English, and perceptions of gender roles. We are seeking to better understand the social attitudes of Latinos and the results of this study will be written in a manuscript that will be submitted for publication and presentation. We are studying this because we hope to better understand the effects of acculturation and the diversity within the Latino community.

WHAT WILL HAPPEN DURING THIS STUDY AND HOW LONG WILL IT TAKE?

If you agree to take part in this study, your involvement will last for approximately 30 minutes. You will be asked to sign this informed consent document, and fill out three questionnaires. One questionnaire asks about the language you primarily speak and the remaining two ask about your social attitudes.

WHAT ARE THE RISKS AND BENEFITS OF PARTICIPATING IN THIS STUDY?

The possible risks and/or discomforts associated with the procedures described in this study include mild boredom while completing the questionnaires.

WILL MY NAME BE REVEALED TO ANYONE OR LINKED TO MY DATA IN ANY WAY?

Your name will only be known to the principal investigators and no one else will see the data. Your name will not be linked to your data in any way.

WHAT IF I HAVE QUESTIONS?

If you have any questions about this research project, please contact: Analia Albuja at 314-971-5715, or afa7635@truman.edu or Dr. Sherri Palmer at 660-785-4667 or spalmer@truman.edu.

Your signature below indicates that the following items are true:

- **I am at least 18 years of age**
- **I understand that my participation is voluntary and I can withdraw at any time**
- **I have read and understand the information presented on this form**

Participant's Name (printed): _____
(Signature of Participant) (Date)

Appendix F

DOCUMENTO DE CONSENTIMIENTO

Título del Proyecto: El Efecto de Idioma Sobre las Percepciones de los Roles de Géneros Entre Latinos en los Estados Unidos

Investigador Principal: Analía Albuja, estudiante del pregrado de psicología en Truman State University y Dra. Sherri Palmer, departamento de psicología

¿CUAL ES EL PROPOSITO DE ESTE ESTUDIO?

Estas invitado a participar en un estudio diseñado para investigar la relación entre el idioma hablado principalmente, español o inglés, y las actitudes sociales. Estamos tratando de entender mejor las actitudes sociales de Latinos y los resultados de este estudio serán escritos en un manuscrito que será presentado y posiblemente publicado. Estamos estudiando esto porque queremos entender mejor los efectos de aculturación y la diversidad entre la comunidad Latina.

¿QUE PASARA DURANTE ESTE ESTUDIO Y CUANTO TIEMPO TOMARA?

Si decides participar en este estudio, tu participación durara alrededor de 30 minutos. Te pediré que firmes este documento de consentimiento, y que respondas a tres encuestas. Una encuesta te preguntara sobre qué idioma hablas principalmente, y las otras dos encuestas te preguntaran sobre tus actitudes sociales.

¿CUALES SON LOS RIESGOS Y BENEFICIOS DE PARTICIPAR EN ESTE ESTUDIO?

Los riesgos posibles y/o incomodidades asociados con el proceso de este estudio incluye aburrimiento moderado mientras terminas las encuestas.

¿SE REVELARA MI NOMBRE A ALGUIEN O SERA ASOCIADO CON MIS RESPUESTAS EN CUALQUIER FORMA?

Tu nombre solo será conocido por los investigadores principales y nadie más vera la información. Tu nombre no será conectado con tus respuestas en ninguna forma.

¿QUE PASA SI TENGO PREGUNTAS?

Si tienes alguna pregunta sobre este proyecto de investigación, por favor contacta a Analía Albuja por teléfono: (314) 971-4715 o por email: afa7635@truman.edu o a la Dra. Sherri Palmer por teléfono: (660) 785-4667 o por email: spalmer@truman.edu

Tu firma significa que las próximas oraciones son verdaderas:

- Tengo mínimo 18 años
- Entiendo que mi participación es voluntaria y que puedo retirarme en cualquier momento
- He leído y entiendo la información presentada en este documento

Nombre del Participante (escrito): _____
(Firma del participante) (Fecha)

Appendix G

Age: _____ Gender: _____ Religion: _____

Education attained (circle one):

- Some High school
- High School Degree or GED
- Some college
- Bachelor's Degree
- Master's Degree
- Advanced Degree

What country were you born in: _____

How much time have you spent in the United States: _____

Is your spouse or partner (circle one):

- Hispanic/Latino
- Non-Hispanic/ Latino
- Not married
- Other

Is your roommate or cohabitating partner (circle one):

- Hispanic/Latino
- Non-Hispanic/ Latino
- I live alone
- Other

What language do you primarily speak in your personal life? (Circle one)

- Only Spanish
- Mostly Spanish, some English
- Both Spanish and English equally
- Mostly English, some Spanish
- Only English

What language do you primarily speak in your professional life? (Circle one)

- Only Spanish
- Mostly Spanish, some English
- Both Spanish and English equally
- Mostly English, some Spanish
- Only English

In the past two weeks would you describe your social interactions as being mostly with (circle one):

- Latinos/Hispanics
- Equal numbers of Latinos/Hispanics and Non-Hispanics
- Non-Hispanics
- Other

In the past two weeks would you describe the TV and music that you listen to as being mostly in (circle one):

- Spanish
- Equal amount of Spanish and English
- English
- Other

In the past two weeks would you describe the books and news you have read as being mostly in (circle one):

- Spanish
- Equal amounts of Spanish and English
- English
- Other

Appendix H

Edad: _____ Género: _____ Religión: _____

Nivel de Educación (Elegir una opción):

- Colegio sin terminar
- Colegio
- Universidad sin terminar
- Título universitario
- Maestría
- Doctorado

En qué país naciste?: _____

Cuanto tiempo has vivido en los Estados Unidos?: _____

Es tu esposo/a o pareja (Elegir una opción):

- Hispano/a o Latino/a
- No Hispano/a o Latino/a
- No soy casado/a
- Otro

Es tu compañero/a de cuarto o pareja que cohabita (Elegir una opción):

- Hispano/a o Latino/a
- No Hispano/a o Latino/a
- Vivo solo/a
- Otro

Que idioma hablas principalmente en tu vida privada? (Elegir una opción):

- Solo español
- Mayormente español, un poco de inglés
- Igualmente español e inglés
- Mayormente inglés, un poco de español
- Solo inglés

Que idioma hablas principalmente en tu vida profesional? (Elegir una opción):

- Solo español
- Mayormente español, un poco de inglés
- Igualmente español e inglés
- Mayormente inglés, un poco de español
- Solo inglés

En las últimas dos semanas, dirías que tus interacciones sociales han sido principalmente con (Elegir una opción):

- Hispanos/ Latinos
- Igual cantidades de Hispanos/Latinos y No Hispanos/ No Latinos
- No Hispanos / No Latinos
- Otro

En las últimas dos semanas, dirías que la música que has escuchado y los programas de televisión que has visto han sido principalmente en (Elegir una opción):

- Español
- Igualmente en español y en inglés
- Inglés
- Otro

En las últimas dos semanas, dirías que los libros que has leído han sido principalmente en (Elegir una opción):

- Español
- Igualmente en español y en inglés
- Inglés
- Otro

Are You Satisfied? An Evaluation of Participant Satisfaction of Adults with Developmental Disabilities Receiving Service from the People Achieving Connections Together (PACT) Center

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Introduction: *An evaluation was conducted of participant satisfaction among adults with developmental disabilities who participate in People Achieving Connections Together (PACT) Center activities in a small, rural Midwestern town. Evaluation is essential for appropriate program development in order to improve service delivery. Specifically, the current study investigated participant satisfaction with PACT services as measured by the PACT Satisfaction Survey (PSS). Methodology:* A convenience sample of 32 participants completed the PSS which consisted of 25 likert-type items with a comment option, three open ended questions, 4 forced choice items and 3 demographic questions. A mixed-methods design, using both qualitative and quantitative analyses, was used to assess participant satisfaction. **Results:** The majority of the participants, 87.5% ($n=28$), indicated that they were very satisfied with the overall services delivered by the PACT center. Bingo had the greatest attendance and 56.3% ($n=18$) of participants were very satisfied with this activity, while science hour was the least popular and only 1/3 attendees was very satisfied. **Conclusion:** Additional research is needed to determine if other aspects of the goals and objectives of the PACT center are being met and to discern the connection with the general quality of life of adults with developmental disabilities using PACT services in this locality.

Introduction

Disability is a major public health concern. Of the world's population, 15% live with some form of disability (World Health Organization, 2011). According to the 2010 U.S. Census, approximately 20% of the Americans, or 56.7 million people, with some type of long-lasting condition or disability (Brault, 2012). The World Health Organization defines disability as more than a health problem; it is multifaceted phenomenon that reveals communication between individuals' bodies and the civilization that they live (WHO, 2011). For this reason, all people, with or without

disabilities, should have opportunities to get involved with important daily activities in order to enhance individual growth, performance, and community involvement (U.S Department of Health and Human Services, 2013).

There are many ways for individuals with disabilities to be involved with their communities in order to play important roles. The People Achieving Connections Together (PACT) Center in a small rural Midwestern town is a non-profit agency that was established in 2009 to help individuals with developmental disabilities achieve self-sustainable living by providing essential skills and improving quality of life (Adair County SB40, 2013). The center provides services that focus on life skills such as cooking, recreation, and basic education and skill training. The program also encourages vocational exploration in order to support and sustain the personal needs of each individual (Adair County SB40, 2013). The PACT center strives to reach service goals in order “to support the uniqueness of each individual, to empower families by actively involving them in the development of services and supports needed to maximize independence, to strive continuously to improve programs and services, and to promote dignity and self-respect” (Adair County SB40, 2013, p.1). According to O’Brien (2006), community centers such as the PACT Center are an important because “people with developmental disabilities should be physically present and participating in their communities and should develop, or be assisted to develop a sense of connectedness to a large network of people with and without disabilities” (p.1).

In addition, there has been an increase in the range of new issues that need to be addressed involving the longevity of people with developmental disabilities and the “focus on the rights and quality of life” of these individuals participating in communities (Berkman & Ambruoso, 2006, p. 53). However, community-based programs for individuals with various forms of disability often focus only on activities rather than on the improvement and continuation of individualized services that support each person’s needs, choices, and strengths (Zeph, 1983). Providers, people that provide services or programs to those with disabilities, hypothesize the needs and wants of participants without obtaining their input; therefore, can only guess at whether they are meeting these needs and desires (McNamara, 2006). Measures of participant satisfaction can be important to understand real wants and desires rather than assuming. In addition, levels of consumer fulfillment response can be measured by satisfaction and can provide important information about interpersonal aspects of care (Oliver, 1996). Such aspects of care include interactions and communication between providers and clients; clients’ perceptions of how much providers respect, understand and listen to them; and whether clients are treated with dignity (Aharony & Strasser, 1993). If addressed, these aspects of care can help to identify how to improve the services for individuals with developmental disabilities.

Furthermore, researchers have identified age as a complicating factor that can determine whether service providers meet the participant’s needs and wants. The needs and goals of services being provided are different among older and young people with disabilities, and those differences may affect individuals’ satisfaction with services (Wiener & Sullivan, 1995). Though there has been an increase in the life span of older individuals, these older individuals are assumed to be weaker and more fragile (Khatutsky, Anderson & Wiener, 2006). Similarly, service providers may misunderstand younger people with disabilities. These individuals are assumed

to have more independent lifestyles, and the desire to participate typical activities similar to people without disabilities enjoy (Batavia, 2003). Understanding whether all individuals with disabilities are satisfied with services is an important part of the assessment and evaluation process, to make sure that the overall health status of the participant improves through their participation in these programs. Measures of satisfaction can help identify important issues to determine what services are needed as people with disabilities live longer, as varying needs are identified among people of different ages, and as advocates continue to recognize the right of disabled individuals to pursue quality of life.

Evaluation is a system of investigation that examines and judges carefully the value or worth of programs and projects. According to the Centers for Disease Control and Prevention (CDC), “evaluation involves procedures that are useful, feasible, ethical, and accurate” (CDC, 2011). Evaluation is an ongoing activity that ascertains program effectiveness. Program evaluation consists of carefully collecting information about a program or some aspect of a program in order to make necessary decisions about the program issues or needs (CDC, 2011; McDavid, Huse, & Hawthorn, 2006; McNamara, 2006). Moreover, evaluation should be a problem-solving enterprise that facilitates and improves decision-making, program performance, communication, controlling and reappraising (Schalock, 1983). Program evaluations should be conducted to improve the program’s efficiency.

There are a variety of evaluation approaches. Worthen, Sanders, and Fitzpatrick (1997) organize the approaches to program evaluation into six categories: objectives-oriented, management-oriented, consumer-oriented, expertise-oriented, adversary-oriented, and participant-oriented. Of all the approaches to program evaluation, the objective-oriented approach is arguably the most practical to use. Objective-orientated evaluation focuses on achieving specific program objectives while determining the extent to which those objectives have been attained by the program (Worthen, Sanders, & Fitzpatrick, 1997). An objective orientation approach focuses on the extent to which pre-determined purposes or objectives were achieved, which must be reached to accomplish a program’s mission (CDC, 2011; McDavid, Huse & Hawthorn, 2006; Schalock, 2001).

An objective-oriented type of evaluation is most beneficial when exploring the outcome components of a program. Outcome variables “embody an organization’s philosophy, goals, and objectives; they can also summarize the outcome of the organizations programmatic services” (Schalock, 1983, p.188). Moreover, evaluation that focuses on these variables is not a separate project within itself, but should be incorporated in the beginning phases of planning and implementation when designing all types of programs. The outcome component is the final stage of programming, and examines whether the program is doing what the designers intended (Cutt & Murray, 2000). To date, the governing members of the PACT center have not conducted any type of formal evaluation of the provided services. Therefore, the current study followed an objective-orientated evaluation approach to determine the outcomes of the goals and mission of the PACT Center.

A year after opening in 2009, the PACT administration sent out satisfaction surveys to participants requesting feedback for the services they received, as well as suggestions for more classes. However, PACT administration has never conducted

formal evaluations to determine whether or not specific class goals or overall center goals are being met. An evaluation is important to ensure ways to reach and improve service goals. Program evaluation can produce valid comparisons between programs to decide which should be retained, fully examined and described as effective in order to duplicate elsewhere (CDC, 2011). Program evaluation of the PACT center can facilitate its administration by assessing how primary goals of the center are met and by seeking information on participants' experiences.

Understanding that evaluation is essential for program development, the present study evaluated participant satisfaction as a way to improve systems of services and supports to enhance the health of adults with developmental disabilities and their participation in community life. The purpose of this study was to conduct an evaluation of the participant satisfaction among adults with developmental disabilities who participate in PACT center program. Specifically, the current study investigated participant satisfaction of the PACT Center as measured by the People Achieving Connections Together Satisfaction Survey.

Methodology

Sample

There are approximately 300 individuals in the target small rural midwestern town with developmental disabilities ranging from mild to severe. The participants at the PACT center have a vast array of physical and developmental disabilities. Approximately 90-200 adults attend monthly classes at the PACT center throughout any given year. A convenience sample of 32 participants were identified during activities at the center and asked to participate in the current study. All of these participants had developmental disabilities such as mental retardation, cerebral palsy, autism, epilepsy, learning disabilities related to brain dysfunction, or similar conditions that are commonly seen by those attending the PACT center. All participants were pre-assessed to determine their ability to understand the instrument and to provide informed consent.

Instrumentation and Analysis

A mixed-methods design using qualitative and quantitative analyses was used to assess participant satisfaction. A descriptive, cross sectional design was utilized to assess the convenience sample of 32 participants. The PACT Satisfaction Survey (PSS) was developed under the advisement of an experienced program evaluator, unassociated with the PACT center, and was modeled after existing general satisfaction instruments, as well as adapted for use by individuals with developmental disabilities. After obtaining Institutional Review Board (IRB) approval for the study, the researcher conducted the survey in a supervised interview format in the PACT facility. The confidential nature of the interview was stressed, and participants were instructed that they could stop the interview at any time. Interviews were adapted for some individuals with different communication abilities. Depending on the level of understanding of the participant interviews lasted approximately 10 to 15 minutes. The survey measured levels of

general satisfaction and individual program satisfaction of the PACT center. The PSS consisted of 25, five-point likert-type items (Very Unsatisfied to Very Satisfied), each of which included a comment section; three open-ended questions; 4 multiple-choice items; and three demographic questions (see Appendix I). Statistical analyses were conducted using the 19th version of the Statistical Product and Service Solutions (SPSS). Analysis primarily involved descriptive statistics including frequencies and percentages to describe data received.

Results

Demographics

In general, 83.1% (n=26) of the participants were white/Caucasian. Respondents were about evenly split between both 14(43.8%) male and 15(46.9%) female. The ages of the respondents ranged from 18-50+, that the largest group was ages 18-35. (Table 1).

Table 1. Description of Demographics of PACT participants

Gender	n	%
Male	14	43.8
Female	15	46.9
Total	32	
Age	n	%
18	2	6.3
19-21	1	3.1
22-25	4	12.5
26-30	6	18.8
31-35	3	9.4
36-40	1	3.1
41-50	3	9.4
50+	9	29
Total	28.1	90.6
Race/Ethnicity	n	%
White/Caucasian	26	81.3
Black/African American	1	3.1
Am. Indian/Alaskan Native	2	6.3
Asian/P.I/Filipino	0	0
Hispanic/Chicano	1	3.1
Total	30	93.75

General satisfaction

The majority of the participants (87.5%; n=28) indicated that they were very satisfied with the services from the PACT center. Also, a majority of the participants were either very satisfied or somewhat satisfied with the times classes were offered (81.3%; n=26). A total of 90.6% (n=29) of the respondents indicated they were very satisfied or somewhat satisfied with the rooms where classes are held at the PACT center. Respondents were very satisfied or somewhat satisfied with the accessibility of the PACT center (90.6%; n=29). Some examples of responses in the comment portion of general satisfaction were “I like coming here” and “It is a good place” (Table 2).

Table 2. General Satisfaction of PACT participants

General Satisfaction Questions	VUS n(%)	SUS n(%)	NS or NUS n(%)	SS n(%)	VS n(%)	NR n(%)
Service Satisfaction	1(3.1%)	0(0%)	0(0%)	2(6.3%)	28(87.75%)	1(3.1%)
Reliability Satisfaction	1(3.1%)	0(0%)	2(6.3%)	3(9.4%)	24(75.0%)	2(6.3%)
Staff Treatment Satisfaction	1(3.1%)	1(3.1%)	0(0%)	2(6.3%)	28(87.5%)	1(3.1%)
Satisfaction of Instructors	1(3.1%)	0(0%)	0(0%)	3(9.4%)	25(78.1%)	3(9.4%)
Satisfaction of class rooms	1(3.1%)	0(0%)	0(0%)	5(15.6%)	24(75.0%)	2(6.3%)
Satisfaction of class times	1(3.1%)	2(6.3%)	0(0%)	6(18.8%)	20(62.5%)	3(9.4%)
Satisfaction of Accessibility	1(3.1%)	1(3.1%)	0(0%)	5(15.6%)	24(75.0%)	1(3.1%)

Note. VUS = very unsatisfied; SUS = somewhat unsatisfied; NS =neither satisfied; NUS = neither unsatisfied; SS = somewhat satisfied; VS =very satisfied; NR =no response.

Program satisfaction

Science hour was the least attended with 90.6% (n=29) of the respondents having never been to this class. A total of 9.4% (n=3) of the respondents that have attended science hour were somewhat satisfied or very satisfied with the class. Guitar class, Walk & Learn, and Outdoor Games were also classes that 87.5% (n=28) of the respondents had never attended. The majority of respondents who attended outdoor games, 6.2% (n=2) were very unsatisfied or neither satisfied or unsatisfied. On the other hand, 68.8% (n=22) of the respondents attended BINGO. BINGO had the greatest attendance and participants were very satisfied with the class (56.3%; n=18). In addition, a total of 53.1% (n=17) of the respondents were very satisfied with a designated “Hang out” session, which is not a class but rather an activity. Movie Time was another popular event. A total of 15 respondents (46.9%) who attended Movie Time were very satisfied (Table 3).

Table 3. Program satisfaction of PACT participants

Programs	VUS n(%)	SUS n(%)	NS or NUS n(%)	SS n(%)	VS n(%)	NR n(%)
Outdoor Games	1(3.1%)	0(0%)	1(3.1%)	1(3.1%)	1(3.1%)	28(87.5%)
Crafts Class	1(3.1%)	0(0%)	0(0%)	4(12.5%)	14(43.8%)	13(40.6%)
Puzzle Time	1(3.1%)	0(0%)	0(0%)	0(0%)	5(15.6%)	26(81.3%)
Dance Class	0(0%)	0(0%)	0(0%)	1(3.1%)	5(15.6%)	26(81.3%)
Music Class	1(3.1%)	0(0%)	0(0%)	2(6.3%)	4(12.5%)	25(78.1%)
Garden Time	0(0%)	0(0%)	0(0%)	2(6.3%)	3(9.4%)	27(84.4%)
Tech Time	1(3.1%)	0(0%)	0(0%)	4(12.5%)	4(12.5%)	23(71.9%)
BINGO	1(3.1%)	0(0%)	0(0%)	3(9.4%)	18(56.3%)	10(31.3%)
Guitar Class	1(3.1%)	0(0%)	0(0%)	0(0%)	3(9.4%)	28(87.5%)
Science Hour	0(0%)	0(0%)	0(0%)	2(6.3%)	1(3.1%)	29(90.6%)
Walk & Learn	1(3.1%)	0(0%)	0(0%)	3(9.4%)	0(0%)	28(87.5%)
Wii Tournament	0(0%)	0(0%)	0(0%)	0(0%)	7(21.9%)	25(78.1%)
Birthday Party	1(3.1%)	0(0%)	0(0%)	1(3.1%)	13(40.6%)	17(53.1%)
Hangout	1(3.1%)	0(0%)	0(0%)	0(0%)	17(53.1%)	14(43.8%)
Movie Time	1(3.1%)	0(0%)	0(0%)	3(9.4%)	15(46.9%)	13(40.6%)
Special Activities on Saturday	1(3.1%)	0(0%)	0(0%)	2(6.3%)	13(40.6%)	16(50%)

Note. VUS = very unsatisfied; SUS = somewhat unsatisfied; NS =neither satisfied; NUS = neither unsatisfied; SS = somewhat satisfied; VS =very satisfied; NR =no response.

Open-ended questions

When asked if they would recommend the PACT center services to others, 87.5% (n=28) participants reported they would. Respondents answered “the different people,” “BINGO,” “Wii” or “iPad” when asked what they liked most about the PACT center. Many respondents did not answer what they least enjoyed about the PACT center. Those who did reply, responded with personal issues such as “I want my family to come to classes,” “I have to pull weeds” for garden time, or “I want time to do what I want to do at the PACT center.” Two respondents explained, “there is not a handicapped button to push at the front door.” Recommendations for other classes participants thought PACT should offer included “evening BINGO class,” “vocal/singing class,” and classes that involve “animals.” Respondents also asked for classes geared toward developing skills for a job. Overall, 81.3% (n=26) of the respondents were happy with community activities and 46.9% (n=15) would like more community activities.

Discussion

The results of this study demonstrated that individuals who participate in the PACT center activities and classes are satisfied with the majority of services provided to them. It is important not to associate high levels of satisfaction with high levels of service. Across all categories, reasons most often given for dissatisfaction with services are inappropriateness and insufficient amounts of participation. The lack of satisfaction should lead to an increase in services and the needs of an individual should be recognized.

A key point that came from the responses of these participants was that there was not a significant amount of participation in several classes. BINGO was noted as a popular class that mostly adults over age 50 attended. On the other hand, Science Hour was the least attended class by participants of all ages. One explanation for attendance patterns could be the age factor of participants. Batavia (2003) notes that adolescents are less likely than persons of other ages to be satisfied with the services they receive because they are at a time of transition from childhood to adulthood. Past literature has linked the age of participants and their attendance at particular activities or classes (Batavia, 2003). Past research also has explored client satisfaction with developmental disabilities services and notes that appropriate service delivery is better for adults than adolescents who are undergoing change (Weller, 1991). In general, levels of satisfaction vary person to person. Future research should seek to explore links between satisfaction ratings of programs like those offered at the PACT center and the age of disabled individuals using the instruments.

Several areas of possible improvement were suggested by the results of this study. Two study participants noted that the PACT center does not have a handicapped button that opens a door at the entrance of the facility. Individuals who use a wheelchair or need assistance with a walker or cane may find it difficult to get inside. One goal that the PACT center had established is to support and maximize independence from individual participants. The lack of a handicapped button hinders the PACT center from allowing individuals that need assistance from obtaining independence. Some participants may feel excluded from the services that the PACT center can provide due to a difficulty of accessibility. Additionally, though a majority of the participants were very satisfied with the room in which classes were being held, some individuals expressed concerns about the space. For example, one participant stated that the room should provide space for several activities to take place without distraction of one another. Moreover, one of the goals of the PACT center is to “empower families by actively involving them in the development of services and supports needed to maximize independence” (Adair County SB40, 2013). Some responses from the interview reflected that many families do not participate. For example, “I want my family to come to classes” was a response when one participant was asked what they liked least about the PACT center. More family involvement may increase attendance of classes and activities. More classes geared for family involvement would be a recommendation for the PACT to consider. In order to get family involvement the infrastructure format for classes should advertise while also detailing specific aspects that classes and activities offer.

Even with improvements in mind, one can conclude from the results that these

participants of the PACT center are relatively happy with their activities at the PACT center. The main goal of the PACT center is to assist individuals in having productive and valued days. Therefore, by evaluating satisfaction one can conclude that the PACT center is meeting this goal. Some areas of satisfaction are easier to address than others. People who participate in community services generally report high levels of life satisfaction (Khatutsky, Anderson, & Wiener, 2006). However, in keeping with the PACT center's mission, one can ask if the PACT center is meeting its purposed goals. While this study does not assess overall quality of life, satisfaction is a component that is assessed. Satisfactions of the services need to be connected with the general quality of life of adults with developmental disabilities. Measurements of satisfaction alone would not determine whether the goal and objectives of the PACT center are being met. As service programs become focused on outcomes, there is a greater interest in measuring quality of life as an indicator of service quality and success. There should be an effort to re-evaluate the satisfaction responses and address as many of the ways to improve the quality of life for the developmentally disabled as possible.

Limitations

While these results are meaningful, the following limitations should be noted. There were only 32 respondents for the PACT satisfaction survey. Approximately 23 people attended on a daily basis during a week of programs at the PACT center. During the time of data collection approximately 50-95 attended PACT center events. Krejcie and Morgan (1970) provided a resourceful method to determine sample size for research activities. According to Krejcie and Morgan's method, a sample size of at least 40 would be most appropriate for the population. Given that a larger number of people attended the PACT center throughout the year, more surveys would need to be collected to achieve generalizeability.

Additionally, this study proved that is difficult to survey people with developmental disabilities. Previous research found that some individuals have the inclination to provide an answer that they think an interviewer wants to hear which leads to a report of high levels of satisfaction (Khatutsky, Anderson, & Wiener, 2006). It is possible that some participants were reluctant to say that they were unsatisfied because they were afraid that a negative rating might result in cancellation or interruption of PACT center services. Furthermore, there were some individuals who were not interviewed because they did not have speaking abilities and could not take the survey by themselves. In the future, other data collection methods need to be employed to capture their satisfaction. One possible method would be to employ an advocate to help these individuals express their ideas, wants, desires, likes and dislikes are. During the study, there were several advocates or caregivers wishing to take the study for participants. These advocates did not take the survey because the main goal of this study was to examine the participant's satisfaction without caregivers or advocate's assistance. In a future study, advocates of the adults with developmental disabilities might be interviewed about how satisfied they are with the services that the individual they are assisting is receiving. Also, advocates might provide answers to survey questions for

individuals who do not have speaking abilities. These advocates will need to know qualities and daily activities of such individuals. The mission of the PACT center is to improve individuals' quality of life. Satisfaction is one part of quality of life. Therefore, satisfaction should be evaluated in an ongoing way in order to assess the full effectiveness of the program.

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Appendix 1

**Directions:**

The following survey is designed to assess your satisfaction with the PACT center. There are no right or wrong answers and you may skip any question you do not wish to answer.

Please make an X in the box for each question.

	Very Unsatisfied	Somewhat Unsatisfied	Neither Satisfied or Unsatisfied	Somewhat Satisfied	Very Satisfied
Overall, how satisfied are you with your service from PACT center					
How satisfied are you with the reliability from the PACT center?					
Are you satisfied with how you are treated by PACT staff?					
How satisfied are you with the variety of classes offered at the PACT center					
How satisfied are you with the instructors for the classes offered at the PACT center					
How satisfied are you with the rooms where classes are held at the PACT center?					
How satisfied are you with the times classes are offered at the PACT center?					
How satisfied are you with the accessibility of the PACT center resources?					

Would you recommend the PACT center to others?

Please circle your response: Yes or No

Comments:

Listed are various programs offered at the PACT center. Please indicate your satisfaction with these programs by placing check in the appropriate column.

	Very Unsatisfied	Somewhat Unsatisfied	Neither Satisfied or Unsatisfied	Somewhat Satisfied	Very Satisfied
Outdoor Games					

___ I have never attended this event

Comments?

Crafts Class					
--------------	--	--	--	--	--

___ I have never attended this event

Comments?

Puzzle Time					
-------------	--	--	--	--	--

___ I have never attended this event

Comments?

Dance Class					
-------------	--	--	--	--	--

___ I have never attended this event

Comments?

Music Class					
-------------	--	--	--	--	--

___ I have never attended this event

Comments?

Garden Time					
-------------	--	--	--	--	--

___ I have never attended this event

Comments?

Tech Time					
-----------	--	--	--	--	--

___ I have never attended this event

Comments?

BINGO

___ I have never attended this event

Comments?

Guitar Class					
--------------	--	--	--	--	--

___ I have never attended this event

Comments?

Science Hour					
--------------	--	--	--	--	--

___ I have never attended this event

Comments?

Walk & Learn					
--------------	--	--	--	--	--

___ I have never attended this event

Comments?

Wii Tournament					
----------------	--	--	--	--	--

___ I have never attended this event

Comments?

Baking Class					
--------------	--	--	--	--	--

___ I have never attended this event

Comments?

Birthday Party					
----------------	--	--	--	--	--

___ I have never attended this event

Comments?

Hangout					
---------	--	--	--	--	--

___ I have never attended this event

Comments?

Movie Time					
------------	--	--	--	--	--

___ I have never attended this event

Comments?

Special Activities on Saturday					
--------------------------------	--	--	--	--	--

___ I have never attended this event

Comments?

Now I'm going to ask you some questions about the PACT center

What do you like most about the PACT center?

What do you like least about the PACT center?

What other programs or classes would you like the PACT to offer?

Now I'm going to ask you some questions about your PACT services.

Do you get to participate enough in community activities or would you like to do more?

___ Enough

___ More

___ Don't know, no response, unclear response

Comments?

What types of community activities do you currently attend?

Tell me how you feel about your community activities.

- ☐ Happy
- ☐ In-between
- ☐ Sad
- ☐ Don't know, no response, unclear response

Comments?

Is there something else you would rather do during the day than what you currently doing?

- ☐ Yes
- ☐ Sometimes
- ☐ No
- ☐ Don't know, no response, unclear response

Comments?

What would you rather be doing?

What keeps you from doing the things you would like to do?

- ☐ Lack of money
- ☐ Lack of transportation
- ☐ My health
- ☐ People won't help me
- ☐ Don't know, no response, unclear response
- ☐ Other reasons

Comments?

Please provide an answer to the following questions about yourself. (Optional)

How do you describe yourself?

- White/Caucasian
- Black/African Am.
- American Indian/Alaskan Native
- Asian/P.I./Filipino
- Hispanic/Chicano
- Multi/Other

What is your gender?

Male Female

What is your age?

18 or under 19-21 22-25 26-30 31-35 36-40 41-50 50+

Thank you for your participation in the PACT participant satisfaction survey.

“Words Were Things To Play With”: Richard Bruce Nugent, Sexology, and Compulsory Citationality

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*This essay examines the relationship between the discourse of early twentieth-century sexology and the writing of Richard Bruce Nugent, one the principal figures of the Harlem Renaissance during the 1920s. In recent years, historians and literary scholars have persuasively explicated the “gay literary voices” of New Negro intellectuals such as Langston Hughes, Countee Cullen, and Wallace Thurman; however, the process by which Nugent articulated his “gay literary voice” remains largely shrouded in mystery as a result of his common characterization as a figure ahead of his time. Herein, through strategic shifting between cultural analysis and close reading of Nugent’s little-studied novel, *Gentleman Jigger*, written between 1928 and 1933 but not published until 2002, I argue that Nugent’s articulation of same-sex desire, which universalizes the possibility of same-sex desire and thereby legitimates its expression, simultaneously appropriates and challenges the surrounding discourse produced by sexologists. In so doing, I revise historical and literary studies of the Harlem Renaissance which characterize Nugent as a figure ahead of his time as well as further illustrate, by making use of the poststructuralist concept of compulsory citationality, the intercultural exchange that defined the New Negro movement.*

“Out of his ten-dollars-a-week-and-tips, Stuartt fed his brothers, paid the rent, bought paper for Aeon’s everlasting writing—and still had the time to discover Krafft-Ebing”² From his discovery of this German sexologist, presumably his *Psychopathia Sexualis*,³ Stuartt, the protagonist of Richard Bruce Nugent’s novel *Gentleman Jigger*, comes to a stark realization. He discerns “the regrettable similarity

¹ I am grateful for the ample feedback I have received on various stages of this manuscript. I would like to thank my mentors: Prof. Maxwell, who read and commented on numerous drafts of this essay during this past summer when I was fortunate to conduct research at Washington University in St. Louis as a Leadership Alliance Summer Research Early Identification Participant; Prof. Torbjorn Wandel of Truman State University, whose lucid conversations during the Fall 2013 term encouraged me to unearth historical contexts in offbeat places; and Prof. Jerrold Hirsch, who has offered insights in our work together and in formal instruction in African American history that have stayed with me and shaped my scholarly endeavors.

² Richard Bruce Nugent, *Gentleman Jigger: A Novel of the Harlem Renaissance* (Philadelphia: De Capo Press, 2008), 11.

³ His text was translated into English as “Perversion of the Sexual Instinct” in 1888.

between the symptoms manifested in one-hundred-and-twenty-seven cases and himself..."⁴ and thus, only nine pages into this *roman à clef* of the Harlem Renaissance, written between 1928 and 1933 but unpublished until 2002, Nugent has presented readers with a novel about the New Negro movement of the 1920s and 1930s in which a gay-identified character figures prominently. What is the historian to make of such a cultural artifact? The cultural historian Robert Darnton argues that "[b]y picking at the document where it is most opaque, we may be able to unravel an alien system of meaning."⁵ Picking at *Jigger's* opacity, then, I ask this question: why are readers met with an obscure German sexologist in a text that sets out to satirize the first period of black urban self-conscious examination of identity?

The degree to which sexological discourse influenced the development of the Harlem Renaissance's "gay voices" is yet to be understood. This is seen most clearly in the case of Richard Bruce Nugent. Nugent's brazen gay voice, as understood by Christa Schwarz, differs from the queer literary voices of his peers Countee Cullen, Langston Hughes, and Claude McKay, not only in its tone, but also in its origins. Schwarz writes, "[w]ith the exception of Nugent, the Renaissance writers treated in [*Gay Voices of the Harlem Renaissance*] linked up to white contemporary authors by appropriating a very specific coded gay discourse that was culturally white-defined."⁶ Cullen, Hughes, and McKay are brought into the mainstream culture while Nugent is unintentionally positioned as an outsider or marginal figure.

In Schwarz's fine treatment of Nugent's literary gay voice, which she argues exemplifies Nugent's rejection of shame produced by surrounding negative discourses, she explains that Nugent's gay identity was solidified by his own engagement with *Psychopathia Sexualis*⁷ and that his gay voice results from his removal of race from its cultural context, thereby integrating it "into the color play visible in his work..."⁸ as well by a formalist obsession with Beauty.⁹ Schwarz addresses in detail the ways that Nugent made use of formalist elements to articulate his position, yet briefly mentions Nugent's exposure to sexological discourse. Through this formalist position, we are left to believe that Nugent stands ahead of his time in his progressive views regarding gender and sexuality. The development of Nugent's conceptualization of same-sex desire can be better understood through the framework of the post-structuralist concept of compulsory citationality. Compulsory citationality, the bedrock of performativity, as Judith Butler explains, means that "[t]here is no subject who is 'free' to stand outside these norms or to negotiate them at a distance; on the contrary, the subject is retroactively produced by these norms in their repetition, precisely as their effect."¹⁰ Nugent then is not a figure ahead of his time but is the effect of the norms of his own historical period, although, as I argue, he subverts these very norms by appropriating and altering them in his literary texts.

⁴ Nugent, 11.

⁵ Robert Darnton, *The Great Cat Massacre and Other Episodes in French Cultural History* (New York: BasicBooks, 1984), 5.

⁶ A. B. Christa Schwarz, *Gay Voices of the Harlem Renaissance* (Bloomington: Indiana University Press, 2003), 143.

⁷ Schwarz, 122.

⁸ Schwarz, 128.

⁹ Schwarz, 131.

¹⁰ Judith Butler, "Critically Queer" in *The Routledge Queer Studies Reader*, ed. Donald E. Hall, Annamarie Jagosie, Andrea Bebell, and Susan Potter (New York: Routledge, 2013), 22.

In the introduction to the anthology of gay Harlem Renaissance texts, the editors of *Black Like Us* anticipate Schwarz in arguing that homosexuality was a defining element of Harlem Renaissance literature and especially of avant-garde modernism. They explain that gay voices can be heard in the poems of Langston Hughes and Countee Cullen, and that homosexuality is fictionally represented by Wallace Thurman in *Blacker the Berry* and *Infants of the Spring*. African-American fictional representation of homosexuality is then framed in the larger context of homosexuality's inclusion in American literature during the first third of the twentieth century. Additionally, *Black Like Us* argues that there was no forum for sexual orientation in "early black civil rights activism" and that black sexual minorities "had been silenced out of shame, fear of criminal retribution, and, importantly, a lack of understanding of the inherently political nature of sexual identity."¹¹ While I agree that there was a tacit agreement that homosexuality would not openly be discussed by black intellectuals in the early twentieth century, I disagree, however, the contention put forward by the editors of *Black Like Us* that "[a]lthough Thurman was not the only black gay or bisexual author published during [the hostile 1930s], he was in fact alone in incorporating explicitly homosexual content into African American writing."¹² Consequently, Nugent is positioned as a marginal figure; however, a foray into his unpublished writings, particularly his novel *Gentleman Jigger*, illustrates a sophisticated and explicit incorporation of "homosexual content into African American writing" during the same period in which Thurman is described as a standout figure.

In *Gentleman Jigger* prominent Harlem figures and places, including Nugent, are represented fictitiously through thinly veiled characters. Stuartt, for example, shares many biographical similarities with Nugent.¹³ Like Nugent, Stuartt is an artist who revels in flouting social norms, yet whose "rudeness was in some strange manner almost courtly in courtesy."¹⁴ Stuartt (Nugent), Rusty (Wallace Thurman), and other black artists resisting the normative tug of racial uplift ideology, reside at the Niggeratti Castle (Manor) in Harlem. Therein they lounge, publish the short-lived magazine *Currents* (*Fire!!* 1926), which is laden with explicit sexual content, but mostly struggle to make their artwork generate funds to pay the rent. However, Stuartt, who leaves Harlem and travels to Greenwich Village and Chicago, is the sole exception to this financial problem.

While "unintentionally" passing as a southern European, Stuartt rapidly achieves fame as a visual artist and dancer in films, only to lose his fame (though not his fortune) by being publicly exposed as a black man during his film premiere at the novel's end. Significantly, in *Jigger* a substantial amount of narrative energy is spent theorizing same-sex desire. As Stuartt travels from Harlem to Greenwich Village and then to Chicago he charts his relationships and material success along the way. When he initially moves to Greenwich Village he has his first sexual encounter with a man, Ray, and throughout the novel continues to have sex with the Italian American gangsters Frank and Orini, spending a lot of time thinking about these relationships.

Although Nugent's conceptualization of same-sex desire was much more brazen

¹¹ Eds. Devon W. Carbado, Dwight A. McBride, and Donald Weise, *Black Like Us: A Century of Lesbian, Gay, and Bisexual African American Fiction* (Berkeley: Cleiss Press, 2011), 9.

¹² Carbado et. al, 22.

¹³ Thomas H. Wirth, "Introduction" in *Gentleman Jigger*, xii.

¹⁴ Nugent, 45.

than his peers, the notion of performativity as described by Butler challenges scholars to locate the “subjectivating norms” through which Nugent develops his novel interpretation.¹⁵

Thus, if there is no subject outside of discursive norms, how then do we explain the existence of cultural artifacts such as Nugent’s *Gentleman Jigger*? If Nugent was different from his peers in his development of a consciousness that rejected shame, reflected in *Jigger*, by what means was this accomplished? This essay argues that rather than by wholly rejecting the claims discursively produced by sexologists that pathologized homosexuality, Nugent, as the effect of compulsory citationality, which engenders his text, appropriates the vocabulary of sexology in order to develop a subversive theory of variable congenital sexuality. Using historical and literary methodology, incessantly shifting between close readings and contextual analysis, I explicate the social logic of *Gentleman Jigger* to produce new knowledge about homosexuality and the Harlem Renaissance. In so doing, this essay revises those claims that characterize Nugent as a man tragically ahead of his time as well as reveals a greater degree of the intercultural exchange that defined the Harlem Renaissance and consequently American modernism than hitherto has been acknowledged.

Sexology and the Harlem Renaissance

Let us begin our exploration of the social logic of *Gentleman Jigger* by surveying the discourse that Nugent frequently cites in his novel: the contested discursive battleground of sexology. The field of sexology comprised academics in fields such as criminology, psychology, and medicine who were all interested in sex as a legitimate field of academic study and largely controlled the terms of the debate, but not before wrestling control from the field of jurisprudence, argues scholar Siobhan Somerville. Somerville elaborates, noting that sexology as a discipline had as its primary aim the wresting of sex from the juridical purview during the late nineteenth century; consequently, under the scrutiny of medicine, deviant sex was conceptualized as a disease, alongside pedophilia and necromancy.¹⁶

And this disease was contagious. The sexologist Dr. Douglas C. McMurtrie, writing in 1913 about the dangers of homosexuality, can stand as a representative example of this strain of thought. McMurtrie explains in his “Notes on Homosexuality” that at college, “J,” a 23-year-old young man with “musical inclinations” made advances on “M,” a 17-year-old, which were met with indifference. That McMurtrie only learned of the incident through a “chance remark by a family member of M’s ‘that J. wrote such remarkable letters’” did not stop him from recommending that M, who knew nothing of J’s “condition,” cease any and all interactions with him. McMurtrie, in fact, felt compelled to make such an intervention for he believed that M’s family “had no recognition of the situation and its dangers.”¹⁷ To sexologists

¹⁵ Butler, 23.

¹⁶ Siobhan B. Somerville, *Queering the Color Line: Race and the Invention of Homosexuality in American Culture* (Durham: Duke University Press, 2000), 18.

¹⁷ Douglas C. McMurtrie, “Notes on Homosexuality: An Example of Acquired Homosexuality in Prison; A Commentary on the Prevalence of Inversion in Germany,” in *Gay/Lesbian Almanac: A New*

Mike McMurtrie, homosexuality functioned as a corrupting influence whose damage could be limited through quarantine. Significantly, Schwarz notes that by the 1920s this conceptualization of deviant sex as a disease was replicated in the black press, which was owned by the black middle class. In attempting to determine why there inexplicably appeared to be more men-loving men and women-loving women in Harlem—arguably a result of the increased visibility afforded to sexually deviant peoples by Harlem’s transformation into a sexual pleasure center—¹⁸ through a “curious blend of moral and medical discourse...homosexuality came to be regarded as a contaminating illness.”¹⁹

Yet sexologists also articulated competing conceptualizations of homosexuality. For instance, in 1918 Dr. Alfred W. Herzog, after offering “no apology for bringing the *Autobiography of an Androgyne* before the members of the learned professions,”²⁰ argued that some expressions of homosexuality should be tolerated and exempt from punishment:

if it be admitted that homosexuality in certain easily recognizable persons is congenital and incurable, and if it also be admitted that it is surely a great deal less harmful than ordinary prostitution, why punish it all, or why not at least exempt from punishment those homosexuals whom Krafft-Ebing so rightly calls ‘true stepchildren of nature?’²¹

Those “easily recognizable persons” who Krafft-Ebbing described as the “true stepchildren of nature” and should thus be exempt from punishment are “androgynes” or someone whose gender is ambiguous, for whom homosexuality is not vice, but instead, Herzog argues, citing Freud, “corresponds to a disturbance of development.”²² Herzog’s conceptualization of homosexuality, which relies on a dichotomous arrangement of good/bad homosexual as well as a developmentally stunted homosexual, differs significantly from McMurtrie’s in as much as it does not adopt the contagion model of same-sex desire, made all the more clear by Herzog’s assertion that *The Autobiography of An Androgyne* was “published in an endeavor to obtain justice and humane treatment for...that class of homosexuals for whom homosexuality...is congenital.”²³

I trace Herzog’s argument in detail because it presents many interesting parallels with the theory of congenital sexuality that Nugent develops in *Gentleman Jigger*. Like Herzog, Nugent argues that same-sex desire is congenital. Yet, crucially, Nugent argues that individuals respond *uniquely* to *universal* impulses of desire. In *Jigger* desire is described as an instinctual, individual response to primarily three universal urges: “the natural biological procreative urge,” “the sex urge” and the vague “sex-something.” Same-sex desire is then presented as but one possible response to these urges and is consequently legitimized as a natural occurrence without resorting to reproducing an essentialist dichotomy of good/bad sexual expression.

Documentary, ed. Jonathan Katz (New York: Harper & Row Publishers, 1983), 341.

¹⁸ Kevin J. Mumford, *Interzones: Black/White Sex Districts in Chicago and New York in the Early Twentieth Century* (New York: Columbia University Press, 1997), 54.

¹⁹ Schwarz, 20.

²⁰ Alfred W. Herzog, “Introduction, by Alfred. W. Herzog” in *Autobiography of an Androgyne* (New Brunswick: Rutgers University Press, 2008), 7.

²¹ Herzog, 13.

²² Herzog, 8

²³ Herzog, 8

Gentleman Jigger represents an unambiguous defense of same-sex desire during a period in which many novelists were coerced to use coded language to speak of men who love men. In the presence of same-sex desire in his work, Nugent shares similarities with his peers, particularly Wallace Thurman, the author *Infants of the Spring* (1932), which is also a *roman à clef* of the Harlem Renaissance. In *Infants* same-sex desire is often signaled by repetitive utterances like Paul Arbian's incessant introduction of his "bootblack" to guests at a Niggeratti rent party: "this is Bud. He has the most perfect body in New York. I'm gonna let you see it soon."²⁴ Paul, who is a visual and textual artist, parades his attractive guest to the rest of the party-goers in a manner that hardly conceals his homoeroticism while leaving open the possibility of mere aesthetic appreciation. In Thurman's fine text same-sex desire is rarely more explicit than this, with the exception of Paul's rather direct answer to white negrotarian Samuel's question very early in the text regarding the matter. Samuel tepidly asks Paul "Did you ever..." he lowered his voice, 'indulge in homosexuality?'"²⁵ Without missing a beat Paul replies "Certainly" and explains that "...the primary function of the sex act is enjoyment."²⁶ This example demonstrates that Paul is arguably free to be queer in *Infants*, yet the text ends in his dramatic suicide and this scene is the only one in which Paul discusses same-sex desire. Significantly, then, Nugent explicitly addresses issues of same-sex desire, largely by appropriating, qualifying, and undermining, the competing articulations of same-sex desire found in sexological discourse.

Instead of the fluidity promised by a continuum, early twentieth-century discourses of sexualities centered on conception of multiple and discrete sexualities. By the 1920s, popular and academic discourses of sexual behavior in the U.S. used the terms "fairy" and "rough trade" to refer to two distinct groups of men who had sex with men. George Chauncey documents the rise of these terms to describe the gender performances and sexual practices of primarily working-class men in his now canonical history *Gay New York: Gender, Urban Culture, and the Making of the Gay Male World, 1890-1940*. Beginning around 1890, "inverted" fairies could be seen in places where working-class men gathered like the Bowery Inn and became "the dominant public images of male sexual abnormality."²⁷ Assigning the term "fairies" to the individuals who practiced the "inversion" of their gender arose in response to the incitement to discourse that Michel Foucault identified as a product of the nineteenth century, a provocation that compelled individuals to lend fixed names to their sexual behaviors.²⁸

Fairies were understood to be males who desired other men because they were truly women trapped in male bodies. They attempted to demonstrate their entrapment through elaborate performances of gender. The women who they took as their models were not the ladies of high society, but instead those women who could be found in largely male public spaces: prostitutes.²⁹ Such men rouged their faces and adopted other markings to signal their availability to the working-class men who frequented saloons, and those who responded to them imagined sex with them as acts of vice,

²⁴ Wallace Thurman, *Infants of the Spring* (Boston, Northeastern University Press, 1992), 176.

²⁵ Thurman, 47.

²⁶ Thurman, 47.

²⁷ George Chauncey, *Gay New York: Gender, Urban Culture, and the Making of the Gay Male World, 1890-1940* (New York: BasicBooks, 1994), 34.

²⁸ Michel Foucault, *The History of Sexuality, Volume I: An Introduction* (New York: Vintage, 1990), 63.

²⁹ Chauncey, 67.

much as they did their sexual encounters with female prostitutes. Those men who were receptive to the advances of effeminate men were more often than not members of the working class and called “rough trade” in early twentieth-century discourse. So long as he played an “active” role, or was the penetrator, sex with a fairy posed little harm to the reputation of a working-class man. The fairy, then, due to his perceived “inversion” of gender, could stand in as an alternate object of desire for working-class men if they were unable to secure sexual satisfaction with a woman, or if the opportunity to have sex with a man presented itself.

A Defense in Masculine Terms

Although there are men who can be identified as “rough trade” in *Jigger*, fairies are not prominent features of the novel; they are briefly mentioned only when Stuartt first moves from Harlem to Greenwich Village, at which point Stuartt authentically inscribes his performative subjectivity with queerness in contrast with his cunning performances in Harlem. In Harlem, Stuartt performed queerness with a wit meant to illicit a response of discomfort. Stuartt’s performance for Leslie Prentiss, a white “negrotarian”, and Mr. Borjolfsen (Bum), a doctoral student at Columbia University, is a telling example of such a performance. Leslie, “an anemic-seeming, vague though good-looking, young white man,” is actually quite conservative although he can be found at banquets celebrating racial progress.³⁰ Stuartt is aware of Leslie’s conservatism and he begins to flirt with Bum while “smil[ing] innocently at Leslie,” and makes him “look too uncomfortable,” in Rusty’s words.³¹ “Where do you find such friends, Leslie? And with such becoming blushes, too! I hadn’t thought a blush was possible in Harlem,” Stuartt asks in order make Leslie’s skin crawl. Stuartt’s interest in Bum, the following paragraph makes clear, is not genuine for “Stuartt had already dropped Bum as a subject of interest,” after making Leslie uncomfortable.³² His performance was “[j]ust a couple of words which, when accepted as simply words to be enjoyed through the incongruous pictures they might conjure forth, would create a bizarre hilarity.”³³

Stuartt’s arguably insolent behavior is typical of representations of queerness in Harlem Renaissance literature. The rudeness of queer characters—the flamboyance of Paul (similar to Stuartt in many ways) in Thurman’s *Infants*, whose sacrifice in the novel’s end symbolizes a “racial death sentence,” for instance—is often employed as a trope to signal the limits of the politics of respectability.³⁴ Nugent, however, jettisons this narrative technique in the second half of the novel, which spatially occurs beyond the “mecca,” Harlem. Stuartt imagined himself to be an entertainer, but in Greenwich “suddenly [he] found himself believed.”³⁵ In Greenwich, Stuartt—as Nugent’s use of passive rather than active voice aptly emphasizes—has lost control of his performance,

³⁰ Nugent, 35.

³¹ Nugent, 36, 41.

³² Nugent, 36.

³³ Nugent, 171.

³⁴ Michel Cobb, “Insolent Racing, Rough Narrative: The Harlem Renaissance’s Impolite Queers,” *Callaloo* 23 no. 1 (2000): 332.

³⁵ Nugent, 171.

and this loss leaves him “rather despondent and thinking the many tumbled thoughts of confused people.”³⁶ It is in the midst of these tumbled thoughts that fairies quickly enter and leave the stage, suggesting that fairies are one stop on Stuartt’s journey to develop a queer consciousness. In this manner, Nugent’s rhetoric resembles the masculinist nature of sexological discourse.

Sitting in Washington Square, Stuartt begins cataloging the “sex-indices,” a term thoroughly addressed in Stuartt’s letter to Bum, of the graceful “Italian hoodlums in exaggerated clothes creased to razor sharpness....” Their “cocky grace which was almost vulgar” is “strangely attractive” to Stuartt.³⁷ Stuartt, unknowingly perhaps, is cruising, as are Greenwich’s rouged fairies:

Painted boys who ogled the hoodlums hungrily and lowered their eyes in false modestly and brazen coquetry as they passed, leaving trails of perfume. He found these blatant travesties distasteful, but fascinating. A hoodlum would say, ‘Hello, sweetheart,’ then turn to his companions and pass some remark that would cause them all to laugh loudly.³⁸

The fairies fascinate Stuartt, yet he is simultaneously disturbed by their “distasteful” personas. The fleeting presence of fairies in Stuartt’s thoughts parallels his fleeting presence in any given place. Stuartt nomadically explores America’s metropolises—Harlem, Greenwich, Chicago, Manhattan—but no site holds his attention for long; they are stops along the road of Stuartt’s personal development. To continue the parallelism to its logical extreme, fairies arguably represent reference points along Stuartt’s mental trek towards the development of a queer consciousness.

An excerpt from a 1983 interview with Nugent’s literary executor Thomas Wirth can help to explain this denigration. In a piece entitled “You See, I am a Homosexual,” Nugent explains that his 1925 poem “Shadow,” first published in the African-American journal *Opportunity*, could be read as more than a “race poem.” Nugent claims that he “intended it to be a soul-searching poem of another kind of lonesomeness,” the sort of marginalization that accompanies being a homosexual.³⁹ “Shadow,” however, does not explicitly announce its sexual content. Nugent states that he was never closeted, because “[i]t has never occurred to me that it was anything to be ashamed of, and it never occurred to me that it was anybody’s business but mine [emphasis in the original].”⁴⁰ The fairy’s purported inversion of gender terms and adoption of visual feminine markers, however, loudly announced his sexual behavior and readily made available his “business.” Nugent’s reservations about male performances of effeminacy may seem odd, coming from an individual who is remembered today for his flamboyancy and bohemianism.⁴¹ One must remember, however, that Nugent’s status as an artist, a member of the creative class removed from the working class, granted him more leeway in his self-presentation without making known his “business” because eccentricity and artistry were intimately linked. Thus,

³⁶ Nugent, 171.

³⁷ Nugent, 174.

³⁸ Nugent, 174.

³⁹ Richard Bruce Nugent, “You See I’m a Homosexual” in *Gay Rebel of the Harlem Renaissance*. Ed by Thomas H. Wirth (Durham: Duke University Press, 2002), 268.

⁴⁰ Nugent, “You See I’m a Homosexual,” in *Gay Rebel*, 268.

⁴¹ Thomas Wirth, “Introduction” in *Gay Rebel*, 21.

a combination of masculinist sexological influences and Harlem Renaissance views regarding homosexuality are cited in a compulsory manner as Nugent fictionalizes the fairies Stuartt encounters on his journey to queer consciousness.

Recognizing the gendered terms of his discourse, Nugent further theorizes same-sex desire by analyzing the power dynamics of same-sex encounters. In *Jigger*, Stuartt deduces that the working-class men he has sex with “merely accept” their same-sex encounters as egalitarian, pleasure producing relationships.⁴² The men Stuartt dates do not believe their sexual behavior with men defines them in any way.⁴³ Despite this, they do not think of their relationships with Stuartt as similar to their interactions with prostitutes—a common way in which working-class, “rough trade” men rationalized their sex with other men in the first third of the twentieth century.

Interestingly enough, Stuartt’s first sexual encounter occurs under the pretenses of prostitution, although Stuartt is not “wise” to this expectation, which is the cause for much embarrassment the morning after. Ray, an Italian “hoodlum,” approaches Stuartt, who offers him a cigarette on a street in Greenwich and, after some small talk, soon realizes that his conversation pal is attracted to men. The two quickly make their way to Stuartt’s apartment, and after a few drinks, fumble their way through sex, although Nugent does not describe the act. The implications of his actions become apparent to Stuartt the morning after: “You know, Ray, it has just occurred to me that you very likely expect money.”⁴⁴ Stuartt’s instincts, which failed him initially, do prove correct as Ray tells him that he followed Stuartt up to his apartment because “[w]ell—I was looking for a good time an’—an’ I thought you would have some money.”⁴⁵ Ray, however, intuitively that Stuartt is “different,” and quickly becomes fond of Stuartt for reasons that are not monetary. Ray seemingly makes an exception for Stuartt; this is exemplified by the way Ray alters his speech to not hurt the “kid.” Stuartt inquires further about Ray’s sexual habits and he replies “I been around. Whenever I need money quick I go with a fa—”⁴⁶ Ray does not finish his sentence because he does not want to hurt Stuartt, although one could imagine that he would not hesitate to say “faggot” around anyone else. But Stuartt, an artist, is different.

Stuartt does believe his sexual acts with men help to define him, or at least distinguish him from most men although he may disagree with the need to do so. This difference in self-perception would seem to suggest unequal emotional investments in the relationships among men such as Ray, Frank, and Orini, as one would imagine that Stuartt would be more invested in the relationship. Stuartt counters, however, that men who have sex with men may do so because they in fact value the egalitarianism of sleeping with a supposedly equal partner. In a rather reductive manner, Stuartt suggests that women “provide the companionship of the dependent rather than the exchange between equals that can exist between two members of the same sex.”⁴⁷ A man, however, “has manliness which they can admire—ergo he does not fit in the uncomfortable limbo to which his appetite should (perhaps) relegate him.”⁴⁸ In

⁴² Nugent, 296.

⁴³ Nugent, 186.

⁴⁴ Nugent, 183.

⁴⁵ Nugent, 187.

⁴⁶ Nugent, 187.

⁴⁷ Nugent, 299.

⁴⁸ Nugent, 303.

satisfying the sex urge, then, the moment of initial attraction which includes sizing up those “sex-indices” can extend temporally into the future to include those imagined feelings of egalitarian conquest that Stuartt posits are important to working-class men like Orini.

Defense by Postage

In Stuartt’s letter to Bum, Nugent tries his own hand at theorizing same-sex desire to determine a latent truth in the modernist fashion of uncovering hidden psychological complexes.⁴⁹ The letter is presented without narrative comment; its contents are not referred to by any character thereafter, both of which suggest that Stuartt’s voice and the narrator’s voice have merged. Given the many biographical similarities between Stuartt and Nugent, it is not unreasonable infer that this merging of focal points allows Nugent to more directly introduce his defense of same-sex desire. This letter, in which Stuartt posits that desire arises as an instinctual response to three universal urges—“the natural biological procreative urge,” “the sex urge,” and the vague “sex-something”—represents *Jigger*’s most vocal defense of same-sex desire. Moreover, in its articulation of a congenital sexuality, *Jigger* mirrors and distorts the extant sexological discourse.

Stuartt writes to Bum “[a]fter many long months of non-communication” while Stuartt is in Chicago preparing to dance in New York with BeBe.⁵⁰ Bum, although white, “practically lived” at the infamous home “267” that housed Harlem’s Niggeratti and was intimately connected with Harlem’s young literary scene. But Stuartt’s reconciliatory gesture indicates that Bum and Stuartt (as well as arguably Stuartt and Harlem), have grown distant. Yet it is precisely this distance—spatial, temporal, and emotional—that encourages Stuartt to choose Bum for his meditation on sexuality that follows his greeting. Stuartt has left Harlem, and through a series of conscious decisions has sharpened his understanding of same-sex desire. To cement his knowledge, however, he must render his experience intelligible to an audience “removed enough to be simpatico,” yet intelligent enough to be deserving of his “literary ejaculations.”⁵¹

That Stuartt refers to his letter as “literary ejaculations” reconfigures a vocabulary found in the letters between the Howard University professor Alain Locke and younger Harlem Renaissance figures such as Countee Cullen and Langston Hughes, whose understandings of sexuality were influenced by their interactions with Locke. In her recent monograph, scholar Anna Pochmara notes that like eccentricity, Harlem Renaissance intellectuals associated artistic creation with creating life. “In the idiosyncratic discourse of Locke’s letters with younger artists,” she observes, “artistic creativity and philosophic inspirations are inherently coded as childbirth...”⁵² In one such letter between Nugent and Locke, in fact, Pochmara discovers that

⁴⁹ Joseph Allen Boone, *Libidinal Currents: Sexuality and the Shaping of Modernism* (Chicago: University of Chicago Press, 1998), 7.

⁵⁰ Nugent, 292.

⁵¹ Nugent, 293.

⁵² Anna Pochmara, *Making the New Negro: Black Authorship, Masculinity, and Sexuality in the*

Nugent “devoted two pages to the extended simile between creative writing and childbirth.”⁵³ Stuartt’s letter to Bum is not life-giving, however, as the ejaculate has no body to inseminate. Ironically, Stuartt instead believes his letter to be wasteful because it is merely a way to “rationalize for myself the assurance which might have been snobbishness were it a little more superficial.”⁵⁴ Although this represents substantive meditation, Nugent seems to caution readers against trusting the gospel truth of Stuartt’s lived experience. While acknowledging Nugent’s precautionary advice not to universalize Stuartt’s findings, it is clear that Stuartt believes his lived experience is important to others. Why else select an audience?

In this fourteen-page letter, Stuartt tells Bum about the most recent developments in his life, namely, that he has achieved material success and has garnered much fame for his artistry. Stuartt reveals to Bum that he has had relationships with at least three men (the “Italian hoodlums” Ray, Frank, and Orini) but that he has decided to marry a wealthy white woman, Wayne. Stuartt has unintentionally been passing while in Chicago and has been “mixing his [sexual] drinks,” but it is only after revealing that he plans to marry Wayne that Stuartt mounts his first preemptive strike. He anticipates that Bum thinks, “What right have I to get married? I’m eccentric. I’m that—outside thing. It’s a lousy-son-of-a-bitching thing to do.”⁵⁵ Stuartt’s defensive behavior here demonstrates that he believed there was a strain of thought that would limit the sorts of love relationships he could develop based on the sexual practices he engaged in. Stuartt ultimately rejects these limits, responding to the remarks he believes Bum will make: “I love Wayne, and what is just as important to our happiness is that she loves me.”⁵⁶ A restrictive view of erotic relationships is rejected in favor of one that maximizes the happiness of all parties involved.

Stuartt attempts to explicate his “whole-to-do with Orini” which is “too logical and with a happy ending.”⁵⁷ The terms that Stuartt has chosen to introduce his subject—“logical” and “happy ending”—are not only early indicators of his rejection of negative terms surrounding the discourses of sexuality, but also suggest the qualified biological determinism that frames his argument. This biological determinism is qualified because Stuartt argues that biology determines when and how desire will be expressed, but not with whom. Biological determinism is spoken of as surrendering to urges: “the natural biological procreative urge,” “the sex urge,” and the vague “sex-something.” Stuartt posits that if one (Bum) is willing to listen, a rational explanation for one’s behavior can be located and proffered:

So, the question I would like to pose is how, or rather, what, is the attraction that one man can possibly have for another. I mean, of course, when that attraction takes on the more active expression that supposedly accompanies heterosexual relations. I don’t mean that the expression need really be physical, but that the attraction is decidedly one with sexual content.⁵⁸

Harlem Renaissance (Amsterdam: Amsterdam University Press, 2011), 75.

⁵³ Pochmara, 75.

⁵⁴ Nugent, 293.

⁵⁵ Nugent, 294.

⁵⁶ Nugent, 294.

⁵⁷ Nugent, 295.

⁵⁸ Nugent, 296.

Stuartt's analysis of sexual attraction begins, unsurprisingly, with the moment of initial attraction. The initial attraction is the first and primary site of explication, as compatible personalities and other variables conducive to lasting interpersonal ties are irrelevant to Stuartt. In the moment of initial attraction, one recognizes a "feeling" or that "sex-something" through "an automatic cataloging of the sex-indices."⁵⁹ The "sex-indices" are bodily elements such as the "sex-promise portrayed in a walk, the tilt of a head, quirk of lips or glance of eyes."⁶⁰ Though Stuartt may not express his attraction in the same "language" (or manner) as most men, Stuartt maintains that his attraction for women can still be felt: "If I think that a head was set at a charming angle on a neck that invites caresses above breasts excitedly poised and firm, I usually clothe my thoughts in some 'poetic' or 'artistic' phrase, because that is my language, my vanity."⁶¹ To Stuartt, artistry is one method of expressing desire when responding to the "sex-something." This sex-something is universal, but when felt while observing individuals one would not expect to be aroused by, "it must confuse in such a case, even as it attracts and seemingly clarifies."⁶² By showing that he expresses desire differently than most, but still is able to find women desirable, Stuartt rejects narrow definitions of desire that imagine it as only means to select a mate for reproduction, though he allows that this is often still the outcome.

Stuartt describes his "automatic cataloging" of men as a practice similar to his evaluation of women, though his method of expressing that desire with men is more varied. When gazing on men, Stuartt notes

the stride of the man, the way his legs show through his trousers and cause them to hang. His feet and the way he places them when he walks or plants them when he sits. His gestures, the way his hair falls, the way he glances, and the set of his lips. All the same things, more or less, that one notes, that a male notes about a female, that a female notes about a male—an automatic cataloging of the sex-indices.⁶³

That "gestures" and the flow of one's trousers are included in this sizing-up indicate that although Stuartt has intended to remove elements such as personality from his rumination on sexuality, performative features—dress and how one inhabits space (the personal stage), for instance—still find their way into his analysis. This is significant because it reveals that although Stuartt celebrates working-class men for their separation of gender from sex—"To them a sex act is merely that, a sex act, and to be enjoyed by two people.... There is not the usual confusing of gender with sex"—he believes that desirability can still be affected by gendered features.⁶⁴ Thus, when attempting to satisfy the sex urge, individuals are capable of considering desirability generally, rather than gender specifically, to achieve satisfaction. The conceptualization of sex as an act is clear when Nugent delineates the various urges that individuals seek to satisfy. To the Italian men who represent to Stuartt "fundamentally honest" individuals, women are a symbol of reproduction:

⁵⁹ Nugent, 297.

⁶⁰ Nugent, 296.

⁶¹ Nugent, 296.

⁶² Nugent, 297.

⁶³ Nugent, 297.

⁶⁴ Nugent, 301.

sex becomes important and woman automatically becomes the symbol of satisfaction. But unconsciously the fact that man is a thinking animal and thinks his sex and therefore thinks woman makes the fact that she is a symbol felt. The natural biological procreative urge finds complete satisfaction in that symbol [emphasis in original].⁶⁵

But the procreative urge is not the only one to which an individual may respond. At times, one's desire is triggered by the "sex urge" in which "sex" becomes the important thing. In attempting to satisfy the sex urge, "[r]eproduction is frequently (still) the outcome, but, to man, sex, not reproduction, is an instinctive *pleasure* [emphasis in the original]."⁶⁶ Sex is conceptualized as an instinctive *pleasure* and while reproduction is relegated to the realm of the functional. In responding to this innate urge, Nugent posits that the gender of one's object of desire plays as little importance as the product of the encounter. In this manner, *Jigger* refuses to produce subjects to be represented by compulsory "heterosexuality" and "homosexuality"; the possibility that in responding to an urge any man may legitimately have sex with another man destabilizes the notion of exclusive, static sexualities.

Conclusion

For a little over a decade *Gentleman Jigger* has been accessible to scholars. While Nugent's other texts, "Smoke, Lilies, and Jade," in particular, have entered the Harlem Renaissance and queer canons, *Gentleman Jigger*, in part as a consequence of competing with longtime lauded novels such as Thurman's *Infants* or Nella Larsen's *Passing*, has not been as quickly adopted. The fact that the *Gentleman Jigger* went unpublished until Thomas Wirth collected and edited the pieces of the disheveled manuscript in 2002 likely contributes to the dearth of scholarship on the novel. Yet unpublished works in general, and *Gentleman Jigger* in particular, can help elucidate the discursive norms that governed modern understandings of sexuality. It is for this reason that *Gentleman Jigger* is a viable object of study for historians and scholars of literature and culture. *Jigger* adds a rich layer of texture to our understanding of modern sexuality. Nugent, as the result of compulsory citationality which engenders *Jigger*, puts forth a position of qualified biological determinism culled from sexological terminology and argues that same-sex desire is but one legitimate response to universally natural urges. *Jigger* demonstrates that the theorizing of same-sex desire was not limited to medical, psychiatric, or legal discourses—individuals who engaged in same-sex encounters theorized their own lived experiences and effectively did so by appropriating the vocabulary of the very discourses that condemned them.

⁶⁵ Nugent, 301.

⁶⁶ Nugent, 301.

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Computational Studies of Precursors to Amino Acids in the Interstellar Medium

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The existence of life makes understanding the origins of life captivating to human imagination. The detection of over 100 organic molecules in the interstellar medium (ISM) suggests that the complex organic molecules that make life possible may have formed extraterrestrially. The discovery of amino acids in the Murchison meteorite provides further evidence that other extraterrestrial bodies may contain precursors to other amino acids. Although the existence of precursors is a possibility, the mechanisms through which they form remain unknown. In the present study, computational methods were used to propose reaction mechanisms between hydrogen cyanide (HCN) with formic acid (CH₂O₂) and acetonitrile (CH₃CN) with ethyl formate (C₃H₆O₂) that could possibly form amino acids in the ISM.

Introduction

Proteins are vital organic compounds that are found within every living organism. Among the most numerous and diverse class of biomolecules, proteins also serve many functions within enzymes, hemoglobin, hormones and antibodies.¹ Proteins themselves are composed of smaller molecules known as amino acids and as a result, amino acids are considered to be the chemical building blocks of life. It is believed that the evolution of amino acids occurred before the existence of life; for instance, prebiotic organic compounds in interstellar space may have been transported to Earth by meteorites, asteroids and comets.² Although organic compounds have been identified in the interstellar medium (ISM), the positive identification of amino acids remains elusive. In this study, mechanisms for the formation of amino acids from known ISM molecules will be examined in order to determine the feasibility of amino acid formation in the ISM.

Background

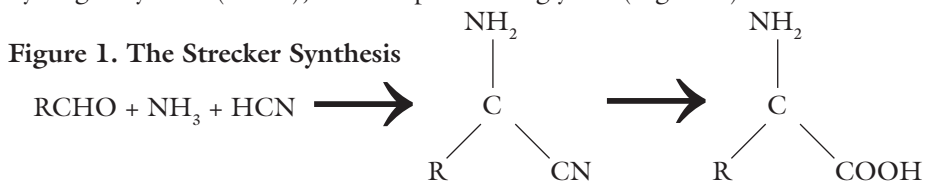
The search for interstellar biomolecules, such as amino acids, has been ongoing since the first spectrum of glycine was detected in 1978.³ To date, over 100 organic molecules have been identified in the ISM, suggesting that terrestrial compounds

can form in outer space as well as on Earth.^{3,4} While most are small and reactive molecules, the positive identification of larger extraterrestrial organic compounds provides compelling evidence that complex biomolecules, such as precursors for amino acids or amino acids themselves, could also be found in the ISM.

Glycine ($\text{NH}_2\text{CH}_2\text{COOH}$), the simplest amino acid, has many functions that are essential to life. It is ubiquitous in proteins that form muscle tissues and the central nervous system. Similarly, alanine ($\text{CH}_3\text{CH}(\text{NH}_2)\text{COOH}$), another small amino acid, plays important roles in metabolizing glucose and strengthening the immune system. Along with glycine and alanine, 18 other amino acid structures are commonly found to allow a great variety of functionality in the body.

Amino acids have been detected in certain areas of the solar system.⁴ For example, the Murchison meteorite has been found to contain over 50 different amino acids that vary in complexity and structure. Since the early days of searching for extraterrestrial molecules, Sagittarius B2 North (Sgr B2), a large star formation centered in the Milky Way galaxy, has been identified as a promising source of complex molecules in space.⁵ Observations were carried out with the IRAM 30 m telescope to analyze the hot core regions of Sgr B2. From the analysis, amino acetonitrile ($\text{NH}_2\text{CH}_2\text{CN}$) was positively identified. While not an amino acid, amino acetonitrile is a trivial precursor to glycine given that nitriles are readily hydrolyzed to carboxylic acids in the presence of water. However, the detection of glycine remains elusive.

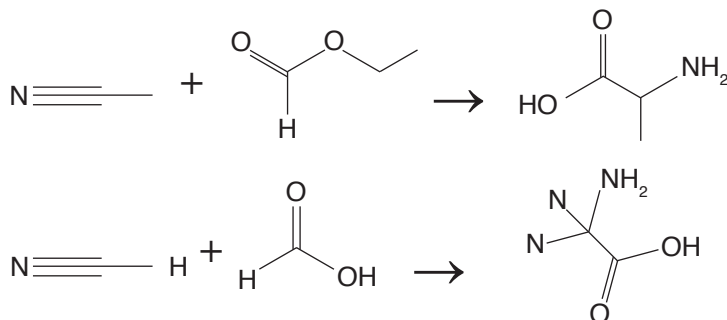
The Strecker Synthesis is the most commonly known mechanism through which amino acids can form. By reacting formaldehyde ($\text{H}_2\text{C}=\text{O}$), ammonia (NH_3) and hydrogen cyanide (HCN), the final product is glycine (Figure 1).⁶



Following the Strecker Synthesis, Hoyle and Wickramasinghe proposed the reaction of methanimine (HNCH_2) and formic acid (HCOOH) to form glycine.⁷ The reactions between the NH_2^+ cation and NH_3^+ radical cation with acetic acid were also proposed as possible pathways to glycine because these reactions are energetically favorable. Although little research has been conducted on the formation of alanine in the ISM, it could be formed in the ISM following the same mechanistic routes by which glycine is presumably formed.

Computationally, the present study seeks to determine whether two amino acids, glycine and alanine (Figure 2), could be formed by reacting ethyl formate ($\text{C}_3\text{H}_6\text{O}_2$) with acetonitrile (CH_3CN) and hydrogen cyanide (HCN) with formic acid (CH_2O_2). In this way, nitriles, ethyl formate and formic acid are viewed as possible precursors for the formation of glycine and alanine, supporting the theory that a variety of biomolecules originated in the ISM. Analysis of the data will indicate which reactions are favorable and which are not.

Figure 2. Interstellar organic compounds to produce alanine (above) and glycine.



Methodology

Solving for Energy

Level: 1

Quantum mechanics and classical mechanics are two established central theories of physics that can be used to rationalize observed phenomena as well as to make predictions. In terms of chemical phenomena, the behavior of electrons provides the foundations to understanding the relationships among structure, reactivity, and bonding.^{7,8} Classical mechanics emphasizes the correlation of the motion of a particle caused by forces that act upon it as described by Newton's laws of motion⁹ however, it fails to adequately describe small, light-weight particles such as electrons. Quantum mechanics characterizes electrons around nuclei by a wavefunction (Ψ), a mathematical function that describes an epistemic state (quantum state) of a particle. The Schrödinger equation (Equation 1)¹⁰

$$i\hbar \frac{\partial}{\partial t} \Psi(r,t) = -\frac{\hbar^2}{2m} \nabla^2 \Psi(r,t) + V(r,t) \Psi(r,t) \quad (1)$$

is a partial differential wave equation that uses the first law of thermodynamics to describe how the quantum state of a physical system changes with time, where the imaginary number (i) and Planck's constant ($\hbar$) is used to relate the wavefunction ($\Psi(r,t)$) defined over space and time of a system to the potential energy (V) which represents the total energy of a system. The Hamiltonian operator H (Equation 2) accounts for the kinetic energy (T) and potential energy (V) of every nucleus (n) and an electron (e) in the system.^{11,12}

$$H = T_N + T_e + V_{NN} = V_{eN} + V_{ee} \quad (2)$$

Level: 2

Solving the Schrödinger equation for a system larger than two bodies is analytically impossible however, different approximations can be made using different levels of theory. In *ab initio* calculations, approximations towards the full solutions to the Schrödinger equation are made by using different combinations of a method (a Hamiltonian) and a basis set (a wavefunction).¹³ Because electrons move faster than

the nuclei, the BornOppenheimer approximation can be applied to the Hamiltonian to eliminate T_N of nuclei.^{14,15} In addition, the Hartree-Fock method is a common approximation towards solving the Schrödinger equation, however it neglects the electron-electron repulsion. Other methods developed to recover the energy associated with electron correlation yield more accurate results, but as more electron correlation is recovered, computational time increases dramatically.¹⁶ Density functional theory (DFT) is an alternative method that expresses the total energy of a system as a function of the electron density, using the Kohn-Sham formalism.¹⁷ DFT models serve to be a sufficient way to approximate solutions for a many-body system in the ground state and provide adequate spin densities for the computation of properties.¹⁸

From this, computational studies can lead to a better understanding of the behavior of biomolecules and reaction mechanisms that are not readily studied experimentally. Quantum mechanical modeling was used to explore the chemical reactions between hydrogen cyanide (HCN) and formic acid (CH_2O_2), as well as acetonitrile (CH_3CN) and ethyl formate ($\text{C}_3\text{H}_6\text{O}_2$) to test the feasibility of these reactions forming extraterrestrially.

Computational Methods

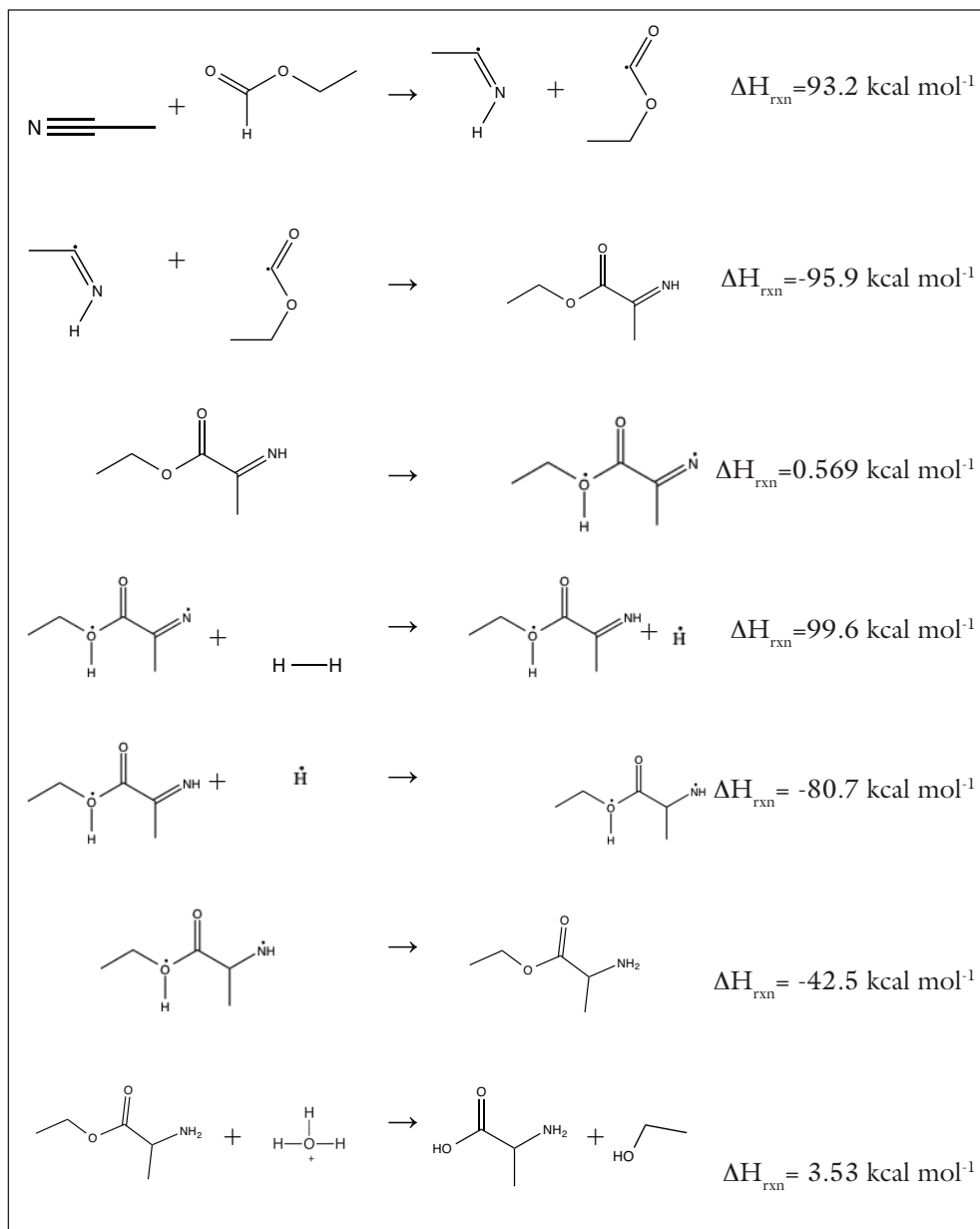
Two reaction mechanisms involving the production of glycine and the production of alanine were obtained. Geometry optimizations of all structures from the two proposed mechanisms were carried out to a stationary point, at which a Hessian matrix is constructed to determine if the optimization meets a local minimum. All calculated stationary points were found using the M06-2X density functional¹⁹⁻²³ coupled with the 6-31+G(d,p) basis set.^{23,24} All energies include zero-point and thermal corrections and are reported as enthalpies. Because of the cold surroundings in the ISM, determining what reactions are favorable in which the energies (ΔH_{rxn}) are less than zero, is important. A reaction is considered favorable if the calculated energies for the products are lower than those of the reactants and unfavorable if the calculated energies of the products are higher than those of the reactants. All calculations were performed using Gaussian 09 running on an Apple OS X.

Results

The overall enthalpies of reaction for alanine and glycine are presented in Table 1. A step-by-step pathway and overall reaction mechanism for alanine is shown in Schemes 1 and 2. Individual enthalpies are also included throughout the mechanism. Similarly, a pathway and overall reaction mechanism for glycine is shown in Schemes 3 and 4.

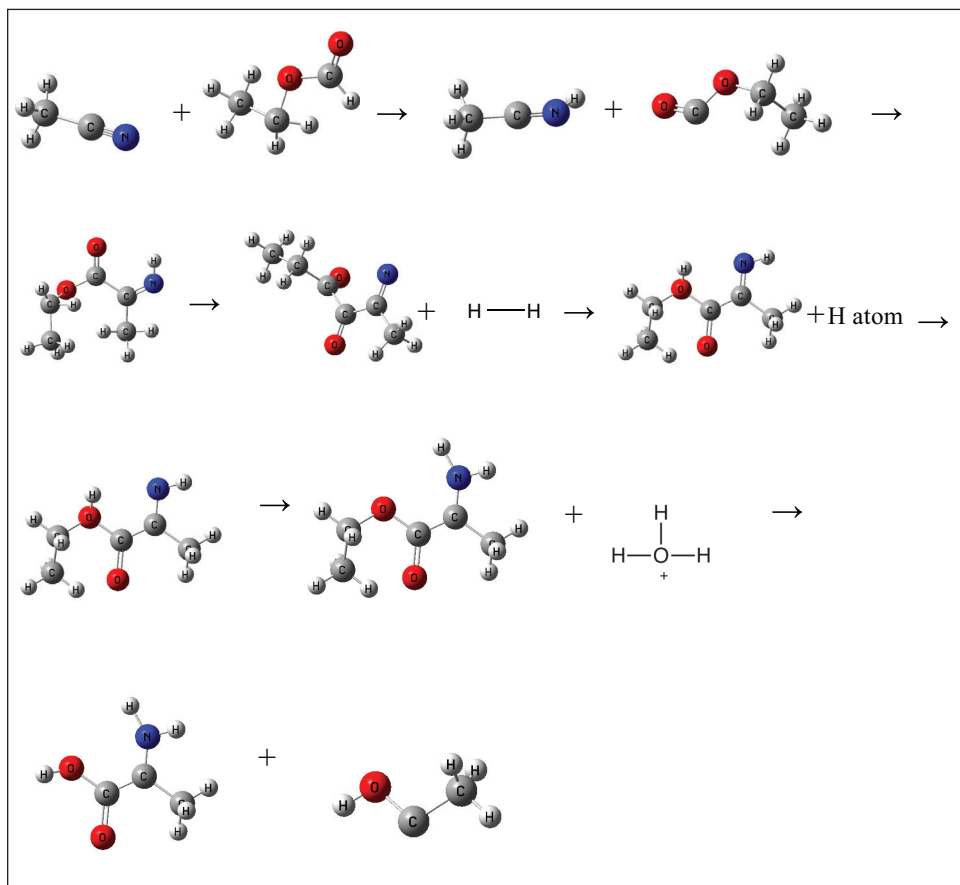
Table 1. Calculated relative enthalpies of formation for alanine and glycine at 298K.

Amino Acid	Enthalpy of Reaction (kcal mol ⁻¹)
Alanine	10.9
Glycine	-21.1

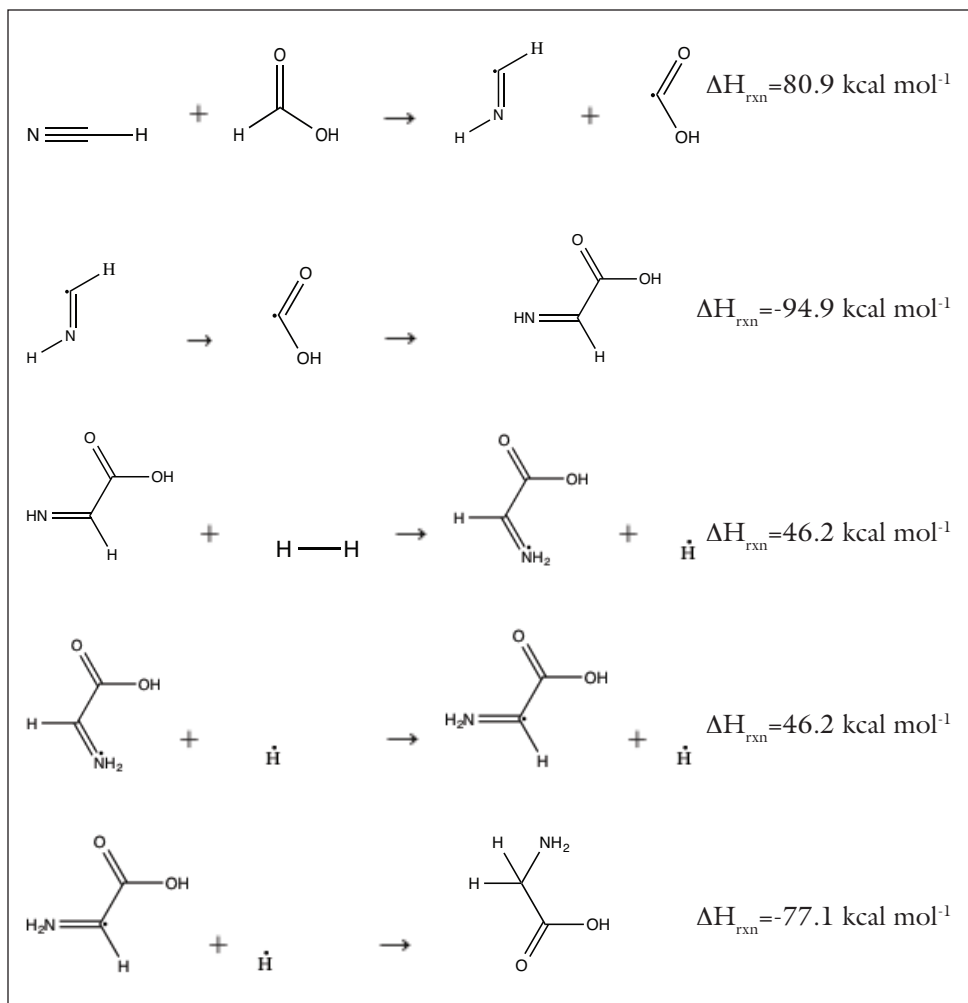


Scheme 1. Reaction mechanism producing Alanine from the starting reactants acetonitrile (CH_3CN) and ethyl formate ($\text{C}_3\text{H}_6\text{O}_2$).

Overall Reaction Mechanism

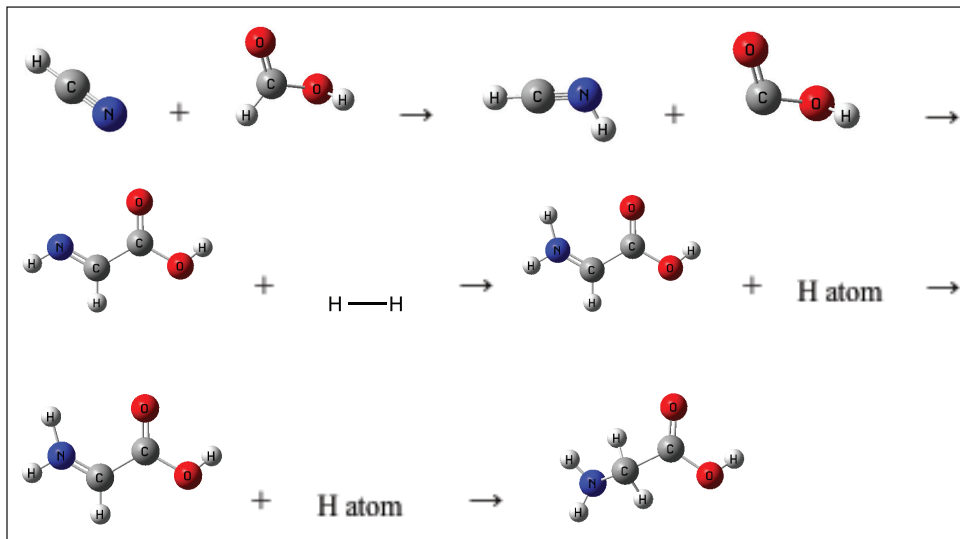


Scheme 2. *The overall reaction mechanism for the formation of the amino acid alanine using interstellar compounds acetonitrile and ethyl formate.*



Scheme 3. A reaction mechanism for the formation of glycine using interstellar organic compounds hydrogen cyanide (HCN) and formic acid (CH_2O_2).

Overall Reaction Mechanism



Scheme 4. An overall reaction mechanism for glycine using interstellar compounds hydrogen cyanide and formic acid.

Discussion

From the pathways in the formation of these amino acids, important details of each reaction mechanism were observed. The two possible reaction mechanisms for alanine and glycine were determined by computing the enthalpies of both reaction mechanisms (Table 1). For both amino acids, the amino group is derived from the nitrile while the central carbon atom is derived from the carbonyl compound. This illustrates a general pattern by which several other amino acids might be synthesized. Since the ISM has an abundant amount of carbon-, nitrogen-, hydrogen-, and oxygen-containing compounds, it is easy to imagine that similar mechanisms to those shown here may be proposed to form a variety of biomolecules.

When considering the synthesis of alanine (Scheme 1), the first step requires a high change in enthalpy of $93.2 \text{ kcal mol}^{-1}$. This is expected, as this step is dominated by the bond dissociation energy of the formyl C-H bond. However, given the high flux of solar radiation in the ISM, surmounting such a barrier is reasonable. The second step, a radical reformation is highly exothermic ($\Delta H_{\text{rxn}} = -95.9 \text{ kcal mol}^{-1}$). The remaining steps show similar trends; highly endothermic for those that homolyze bonds and highly exothermic for those that recombine radicals. The acid-catalyzed hydrolysis of the ester was chosen as the final step in this mechanism. This step is found to be mildly endothermic, and the overall ΔH_{rxn} for the entire proposed mechanism was found to be $10.9 \text{ kcal mol}^{-1}$.

Conversely, the reaction mechanism (Schemes 3 and 4) producing glycine resulted in an overall negative change in enthalpy ($-21.1 \text{ kcal mol}^{-1}$), despite following a similar set of reactions. When comparing the overall unfavorable reaction of alanine to the overall favorable reaction of glycine, alanine was determined to be unfavorable partially due to the endothermic hydrolysis required in the final step. This suggests that alternate final steps that will require less energy for the reaction to proceed should be taken into consideration. Given that charged species are unstable in the ISM relative to radicals, radical chemistry rather than acid-catalyzed chemistry should be considered for the final step.

Conclusion

The detailed computational investigations of step-by-step pathways for the formation of two amino acids from interstellar organic compounds were analyzed. Although the current results are only a preliminary step toward understanding the possible interstellar synthesis of glycine and alanine, the results suggest that glycine could form readily. The formation of alanine via the proposed route is unfavorable, but not significantly so. To further this study, additional proposed reaction mechanisms should be constructed to assure that additional possibilities are taken into consideration. In addition, future studies will also include determining reaction mechanisms using bulkier interstellar organic compounds to produce more complex amino acids. By examining different reaction mechanisms in parallel, the results will give a better insight into which mechanisms are most important for the ISM synthesis of amino acids.

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Relationship of African American Vernacular English to Disproportionate Representation of African American Students in Special Education: A Meta-Synthesis of Research

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There is extensive research concerning disproportionate representation of African American students in special education classrooms and proposed ways to mediate this disproportionate representation. However, there is a lack of research that explores the specific impact that speaking a social dialect has on disproportionate representation. This study consists of an extensive review of literature concerning the relationship between disproportionate representations of African American students in special education and the speaking of the social dialect African American Vernacular English (AAVE). The research analyzes the arguments made by past researchers in order to understand this relationship.

Key words: AAVE, disproportionate representation

Introduction

According to Oswald, Coutinho, Best, & Singh (1999), disproportionate representation is “the extent to which membership in a given (ethnic, socioeconomic, linguistic, or gender) group affects the probability of being placed in a specific disability category” (p. 198). Disproportionate representation can be specifically noticed in historically underserved groups, especially in high-incidence disabilities, which include emotional or behavioral disorders, intellectual disabilities, and learning disabilities. (Artiles, Kozleski, Trent, Osher, & Ortiz, 2010; Hallahan, Kauffman, & Pullen, 2012). The members of these underserved groups are the “students from diverse racial, cultural, linguistic, and economically disadvantaged backgrounds who have experienced sustained school failure over time,” who oftentimes speak a social dialect, such as African American Vernacular English (AAVE) (As cited in Artiles et al., 2010, p. 279). One example of disproportionate representation is that, while African American students account for 20.5% of the 6.5 million students receiving special education services they only make up 15.1% of the total school population (Hallahan et al., 2012; Hardman, Drew, & Egan, 2011; U.S. Department of Education, 2009 & 2011).

Special education is different from general education because it requires specifically “designed instruction that meets the unusual needs of an exceptional student and that might require special materials, teaching techniques, or equipments” (Hallahan, et al., 2012, p. 10). In order for a student to receive special education services two criteria must be met. The first criterion is “the student must be identified as having one of the disability conditions identified in federal law, or a corresponding condition defined in a state’s special education rules and regulations” (Hardman et al., 2011, p. 29). The second criterion for special education eligibility is the student’s demonstration of a need for specialized instruction and related services in order to receive an appropriate education (Hardman et al., 2011). For the purposes of this study, the high-incidence categories (learning disability, emotional and/or behavior disorders, and intellectual disabilities) of special education were of particular interests due to minority students often being disproportionately represented in those categories (Hallahan et al., 2012).

Due to problems with the assessment process, the current special education system intervenes and assists not only students who need the services; but unfortunately students who may not. Previous researchers have noted that there are vulnerabilities in the referral and testing processes, which are likely to yield mistakes in referrals (Losen & Orfield, 2002; Skiba et al., 2006). Current research shows that teachers do have to use their own opinions, judgments, and biases’ on kindergarten to twelfth grade students when deciding whether the student should be referred for special education services (Harris-Murri, King, & Rostenberg, 2006). Errors can also occur during the testing for eligibility process due to the absence of a definitive test that determines whether a student has a high-incidence disability (Donovan & Cross, 2002). Research suggests that the tests that are used to determine eligibility for receiving special education services are biased against speakers of a social dialect, specifically AAVE (Patton, 1998; Skiba et al., 2006). The tests used to determine eligibility are typically language based tests, which speakers of a social dialect may have difficulty with, such as the Intelligent Quotient test (IQ) (Hardman et al., 2011; Patton, 1998; Skiba et al., 2006). An example of verbal language’s relationship to standardized test can be seen in Campbell & Dollaghan (1997) who used the Woodcock Language Proficiency Battery-Revised’s Oral Language Scale, which is a standardized assessment, to compare and test the minority and majority student participants on picture vocabulary and oral vocabulary, as well as, verbal analogies and listening comprehension. The results found that the minority students performed significantly lower on this knowledge-dependent component of the test, due to the test measuring language skills (Campbell & Dollaghan, 1997). Although the language difference is objective, the potentially subjective nature of the teacher’s judgments may cause an over referral of African American students to special education, and ultimately those students being disproportionately represented in special education.

Disproportionate representation of African American can affect their academic and career success. School and employment outcomes for students with disabilities are abominable. The first negative outcome is that 56.5% of high school aged students who were taking special education classes in 2009 dropped out (Hardman et al., 2011). For the students who do graduate, they typically do not further their education post-graduation; roughly 30% do go to college (Hardman et al., 2011). Only 21% of students are employed a few years after graduation (Hardman et al.,

2011). Their typical jobs are low performing, minimum wage occupations (Hardman et al., 2011). These negative outcomes are some of the reasons why disproportionate representation in general needs to be mediate, but for the purposes of this study specifically of African American students needs to be mediated, especially African American students who speak AAVE.

Many AAVE speakers, particularly high-school aged students, wrestle to accept the idea that speaking Standard American English (SAE) correlates with being successful academically and in a job or career (Godley & Escher, 2012). On the one hand many professionals and upperclassmen high school students believe that using SAE is important not because it is a better dialect, but because “people in powerful academic and professional positions expect others to communicate in formal SAE and often form negative opinions of people who do not” (As cited in Godley & Escher, 2012, p. 704). On the other hand students often feel conflicted about using SAE. One small study over the course of three years in a predominately African American neighborhood in the Midwest, with a 99% African American study body found that of the 51 tenth grade students’ response that were chose to participate in Godley and Escher’s (2012) study, only 10 of the students (20%) believe that SAE alone should be spoken in the class, while a greater amount, 18 students (35%), believed that both AAVE and SAE should be spoken in the class. The remaining 23 students (45%) argued that only AAVE should be used in class (Godley & Escher, 2012). Previous research suggests that students are yet to reach a consensus on whether speaking AAVE in the class is acceptable (Dickar, 2004; Godley & Escher, 2012). Although the participants of Godley & Escher’s (2012) study believed that their teachers did not negatively judge them for speaking AAVE, research demonstrates that AAVE speakers have a veiled fear of being perceived or judged as unintelligent when their social dialect is spoken in the classroom setting (Dickar, 2004).

Research indicates there are a number of reasons that help explain disproportionate representation of African American students in special education, including cultural differences, assessment bias, the subjective nature of referral process, and language differences between teacher and student. Many researchers have attempted to answer the question of whether teachers have negative opinions about African American Vernacular English (AAVE) speakers (Guskin, 1970; Lewis, 2008; Sealey-Ruiz, 2006). Although AAVE, like other social dialects, is “a logical and rule-governed variety of English,” that is different from Standard American English (SAE) in its “grammatical, phonological, and stylistic features,” teachers continue to believe that “speaking AAVE is ungrammatical, lazy, and unintelligent” (As cited in Godley & Escher, 2012, p. 705). Because many teachers do not recognize AAVE as grammatical or intelligent, it is more common for teachers to question the intelligence of AAVE speakers (Godley & Escher, 2012). Due to research suggesting a link between speaking AAVE and presumed intelligence (Godley & Escher, 2012), and because teachers’ perceptions have been shown to be influential in the placement of students in special education services (Harris-Murri et al., 2006), further research should be conducted to explore and substantiate these relationships. Such research would aide in the understanding of disproportionate representation of AAVE and other social dialect speakers.

For the past two decades, there has been research concerning disproportionate representation of minority students, especially African Americans, within special

education classrooms (Adger, Wolfram, Detwyler, & Harry, 1993; Blanchett, 2006; Hallahan et al., 2012; Harry & Anderson, 1994; Hosp & Reschly, 2004). There are many factors that contribute to disproportionate representation of African American students in special education, including socioeconomic status, socio-cultural factors and gender. However, this study asserts that minority students, more specifically those who are African American, are often wrongfully placed in special education classrooms, in part because the usage of a social dialect, such as African American Vernacular English (AAVE).

In the present study, an extensive review of literature examining the relationship between disproportionate representation of African American students in special education and AAVE was conducted. Within this meta-synthesis, the researcher specifically focused on previous literature that used the terms “social dialects,” “AAVE,” “linguistic barriers,” “disproportionate representation,” and/or “in special education classrooms” as keywords. The researcher focused on literature that was peer-reviewed and published from 2003-2013 for the extended review of literature. Many of the sources used were gathered from the database Educational Resources Information Center (ERIC). The researcher sought to investigate the impact that speaking a social dialect had on increasing students’ chances of placement into special education. Moreover, the researcher focused on how much disproportionate representation of African American students in high-incidence categories stems from those students’ use of AAVE. The results of this research will attempt to suggest ways to mediate disproportionate representation of African American students who speak AAVE in special education using culturally responsive teaching techniques.

Special Education Background & Referral Process

In 2010, nearly 300,000 more students were receiving special education than in 2009 (U.S. Department of Education, 2009 & 2011). In 2010, 6,481,269 students were receiving special education services (Demographics). Some of the reasons students were receiving special education services for the 2009-2010 academic school year, in relation to the high-incidence disabilities, were specific learning disabilities (38%), emotional disturbances (6%), and intellectual disabilities (~1%) (U.S. Department of Education, 2012).

In order for a student to be placed in special education there is a referral-to-identification process that begins with referral and evaluation, moves to an Individualized Education Program (IEP) that “spells out how a school plans to meet an exceptional student’s needs,” and then ends with placement. (Hallahan et al., 2012, p. 32). For example, many states use an IQ-achievement-discrepancy, which is “a comparison between scores on standardized intelligence and achievement tests” (Hallahan et al., 2012, p. 189), to determine eligibility for having a specific learning disability. After the student is identified as having a disability as a result of the assessments and evaluation, there is an IEP meeting held with parents and school professionals. During this meeting, the IEP for the student is written and special education services begin (Hallahan et al., 2012). The assessment process, from referral

to placement is valued by professional judgment.

The majority of the factors that contribute to the referral of a student for one of the high-incidence disabilities are determined by the teachers' judgments and opinions. For example, some students may present with inattention or misbehavior, but there is no objective way to measure that behavior. Typically a student is identified as a result of a school professional or parent having suspicion, typically concerning achievement or behavior, which the student needs to be evaluated for having a disability (Hallahan et al., 2012).

Understanding the reasons that cause teachers to make a referral to receive special education is especially important when culturally and linguistically diverse students are involved (Harris-Murri et al., 2006). Oftentimes, the general education teacher plays a significant role in identifying potential students for referral to special education because it is "general education classroom teachers [that] initiate the referral process of students" (Dunn, Cole, & Estrada, 2009, p. 28). The students that are referred by general education teachers have a high chance of being deemed eligible to receive services and titled as having a disability (As cited in Harris-Murri, et al., 2006). There are many factors that influence the general education teachers' likeliness to refer a student for special education including "the interaction of teachers' perspectives, classroom practices, curriculum expectations, and students' characteristics" (Dunn et al., 2009, p. 28), as well as "teacher attitudes, perceptions, expectations, and knowledge" (Harris-Murri et al., 2006, p. 787). Harris-Murri and fellow researchers (2006) argue that due to teachers' own cultural beliefs, a students' behavior and emotional well-being could be misinterpreted and viewed as disordered.

Another factor that is important to consider when discussing the referral process is the testing bias that AAVE speakers may experience, especially when testing to determine eligibility for high-incidence disabilities. Whether a child has a learning disorder, emotional or behavior disorder or is intellectually disabled is typically decided based on the interpretation of the results from the tests administered during evaluations. The tests are problematic because "when test-takers differ in their exposure to concepts, words, or activities, as is often the case in children from different ethnic, cultural, or economically backgrounds, any assessment tool that taps the child's existing store of knowledge runs the risk of confusing 'difference' with 'disorder'" (Campbell & Dollaghan, 1997). However, one of the tests that is often taken during the identification process, which will contribute to the student being eligible or non-eligible for special education services, is the Intelligence Quotient (IQ), which is a language-based test (Hallahan et al., 2012). Research suggests that "there are pitfalls in assessing the intellectual characteristics of a group of children by examining the distribution of their IQs" (Hallahan et al., 2012, p. 277). When language based or intelligent quotient tests are used AAVE speakers, particularly elementary-aged students, have difficulty with the language on the test, therefore causing a questionable representation of students' intelligence (Hallahan et al., 2012). Research suggests that "because standardized tests typically are normed on racial and ethnic groups..., there is a linguistic and cultural skewing toward the majority group," which is middle-class white people (Seymour, 2004, p. 8). However, research also shows that consequentially, "linguistic and cultural differences associated with dialects such as AAE, [which is an alternative acronym for AAVE], are not adequately reflected

in the normative distribution of the tests. Thus, AAE speaking children can be and are penalized for their dialect” (Seymour, 2004, p. 8).

Cultural Differences & Disproportionate Representation

One additional possible cause of disproportionate representation is a communication breakdown that occurs between students and teachers due to their cultural differences. This communication breakdown occurs when minority students, who tend to be African American, speak a social dialect and are taught by teachers who are typically middle-aged, middle-class, white females with little to no familiarity of AAVE or other social dialects (Skiba et al., 2006; Whitney, 2005). A main cause of the communication breakdown is attributed to teachers typically using Standard American English (SAE) and having difficulty understanding the AAVE speaking students. As Adger, Wolfram, Detwyler, & Harry (1993) explain, “the home/school language mismatch research is relevant to special education classrooms [because] there is a cultural difference between students and teachers” (p. 2). Recurring miscommunication between the students and teacher could lead to the teacher questioning the students’ ability to perform at grade level and, as a result, believing that the students need to be placed in special education.

For this reason, behavior and language common in the African American community oftentimes clash with what is considered acceptable in the classroom. African American students, specifically elementary-aged AAVE speakers, have difficulty determining which dialect and behavior is acceptable in what settings. For example, it is common in AAVE to speak in an elevated voice and at the same time as whomever is being conversed with, while in the classroom environment, students are expected to use inside or quieter voices and practice turn taking (Delpit, 2006). Some older African American students believe that the school setting should be “comfortable,” which typically means speaking AAVE and partaking in mannerisms unique to AAVE speakers (Godley & Escher, 2012; Harris-Murri et al., 2006). Many of the behavioral habits that are acceptable for the African American community of AAVE speakers are not acceptable outside of the community. On the other hand, many of the high-school AAVE speakers that participated in Godley and Escher’s (2012) research believe that speaking SAE is not accepted in the home or community. Many teachers and students believe that speakers of AAVE must adopt the cultural behaviors and language that is acceptable in mainstream classrooms, which is SAE, in order to successfully communicate and avoid being referred for special education. However, Whitney (2005) believes that teachers should become accustomed to students home language.

AAVE’s Relationship to Disproportionate Representation

The current study focused solely on the use of a social dialect’s contribution to the disproportionate representation. In particular, this study focused on negative attitudes that teachers have towards the competency of AAVE speakers. Many teachers and other professionals inaccurately perceive AAVE as slang (As cited in Whitney, 2005). This claim is inaccurate because Linguists acknowledge AAVE as a form of English

(Godley & Escher, 2012; Whitney, 2005). This study asserts that there is a relationship between AAVE and disproportionate representation because in recent years only 56% of African American students graduated from high school and approximately 90% of African Americans speak using one or more characteristics of AAVE on occasion (As cited in Whitney, 2005), which is a dialect that many teachers that interact with students who speak AAVE are unfamiliar with. Another part of the disproportionate representation problem is the differing language system between the social dialects and the schools. Typically the schools' language system is SAE (Adger et al., 1993). Because the language system used in the school setting is linguistically different than AAVE, students who speak AAVE have two main challenges when interacting with teachers who use SAE.

First, AAVE, like many social dialects, is phonetically governed by different rules than SAE, and so AAVE sounds distinctly different from SAE to listeners. For example, AAVE speakers often use final consonant cluster reduction, and so an AAVE speaker would pronounce the word "hand" without the /d/. In addition, AAVE speakers replace /th/ with /d/ and thus pronounce the word "this" as "dis." Moreover, it is common in AAVE to substitute the velar nasal, the last sound in the word singing, for the alveolar nasal, resulting in "singing" becoming "singin'." Finally, a distinguishable characteristic of AAVE is the usage of the copula "to be" (Edwards, 2004). In AAVE, "be" is typically used for the habitual aspect. An example of how an AAVE speaker would use "be" is, "She be cooking on Sundays." AAVE speakers adhere to these rules naturally, although they clash with what is used in the general education classroom, causing the students to be exposed to two different language systems.

Second, SAE, the language used in the school setting, leaves students with the impression that SAE is better than AAVE, when in reality the two language systems are merely different. Wheeler & Swords (2004) expressed concern that teachers viewed AAVE speakers as "slower, less able, and less intelligent" as compared to Standard-English speaking classmates (p. 470), which led to the teacher's standards being reduced for AAVE speakers (Whitney, 2006). However, research suggests that "AAVE should not be merely tolerated in academic settings but should be used as an instructional resource" (Godley, Sweetland, Wheeler, Minnici, & Carpenter, 2006, p. 34). If teachers could alter their opinions to become more accepting of AAVE as a difference, then it could be used to their benefit because it can lead to exploring different cultural avenues in the classroom setting.

Conclusion: Culturally Responsive Teaching

To be successful, teachers need to be well aware of the role their students' cultures play in shaping how students interact socially and behaviorally (Cartledge & Kourea, 2008). In particular, there are strategies that teachers can use to "decrease cultural misunderstandings and miscommunication" (Ford, 2010, p. 53), and thus reduce disproportionate representation of African American students in special education. Culturally responsive teaching "involves utilizing learners' culture, prior experiences, and performance styles to provide instruction that empowers learners

intellectually, socially, emotionally, and politically...” (Shealey, McHatton, & Wilson, 2011, p. 383). Research suggests that culturally responsive teaching “has a positive effect on students’ academic achievement” (Whitney, 2005, p. 66). There are many components of culturally responsive teaching that could be incorporated into the classroom, including encouraging code-switching, incorporating multiculturalism in the classroom, allowing students to write like real authors, and lastly educating teachers (Whitney, 2005).

In addition to becoming more accepting of AAVE, teachers can encourage code-switching and incorporate multiculturalism into the classroom (Whitney, 2005). Code-switching occurs when speakers alter their language to the dialect that is most appropriate for the situation, audience, and environment (Whitney, 2005). Code-switching is common in speakers of a social dialect who work in professional settings where speaking in their vernacular or home dialect is not acceptable (Godley & Escher, 2012; Wheeler, 2005). In the classroom, code-switching can be incorporated by using role-playing. Code-switching can be a useful tool for speakers of a social dialect because it allows the speaker to continue to be a part of their social community, as well as not have to experience the negative consequences associated with speaking a social dialect (Godley & Escher, 2012). Code-switching provides speakers of social dialects with the differences between their dialect and SAE, which in turns provide speakers of social dialects the knowledge necessary to decide which dialect to speak in different settings (Whitney, 2005). Research shows that it is a more beneficial long-term technique to contrast AAVE and SAE, than to continuously correct AAVE speakers (As cited in Whitney, 2005). Ideally, encouraging code-switching can help to mediate the problem of disproportionate representation by reducing the chances students who do speak with a social dialect will speak their social dialect in the classroom setting.

By teachers incorporating code-switching into class, AAVE and other social dialect speakers will no longer have to wrestle with accepting SAE as better than AAVE, as mentioned in the introduction. Code-switching allows speakers to actively participate in their personal culture, as well as the culture of the school and professional settings. Code-switching benefits teachers because it enables students to use their social dialect as a means to facilitate using SAE (Hill, 2009), as opposed to having students to abandon the familiar and accept the unfamiliar for the sake of academic success. Code-switching allows for teachers to make a transition from correcting students who speak AAVE to helping students learn and use SAE (Wheeler & Swords, 2006; Whitney, 2005). Essentially, encouraging code-switching helps create effective and comfortably diverse writers and speakers (Whitney, 2005).

Creating “a learning environment that values diversity in experience, culture, and language” (Whitney, 2005, p. 65) shows that teachers respect AAVE, as well as other social dialects, in the classroom. Teachers can incorporate multiculturalism into the classroom through various ways, including adding a diverse author to the reading list. Because there are enough methods that can be used to incorporate multiculturalism into the classroom teachers can decide which method is most beneficial for their classrooms and more importantly which method is comfortable for them (Whitney, 2005). Specifically if the teacher chooses to incorporate AAVE into the classroom, Whitney (2005) suggests books including Zora Neale Hurston’s *Their Eyes Were Watching God*, Toni Morrison’s *The Bluest Eye*, as well as many other authors that

write using AAVE. Because our current school system is failing diverse children, incorporating multiculturalism into classrooms will allow school systems to take a different approach, which acknowledges and supports multiculturalism.

Allowing students to write like real authors, who do not only use SAE, helps students learn how to become more aware of the different audiences they interact with, therefore giving students a chance to reflect on what words or dialects are used in which environment (Whitney, 2005). Teachers allowing students to authentically write, inadvertently provides students with alternative ways to express themselves and use the social dialect that is most comfortable for them (Whitney, 2005). Learning to write for a variety of audiences teaches students that the most important part of communicating is being understood and understanding (Whitney, 2005). It also can help students transfer this thinking to oral situations, where students can learn to speak depending on the setting, or practice code-switching (Whitney, 2005). Learning to meet the variety of needs of different audiences can help reduce disproportionate representation because it teaches students that social dialects are acceptable, depending on the audience. It also provides AAVE speakers with an avenue to openly express themselves, using their dialect.

Educating teachers about AAVE could change their negative attitudes towards AAVE speakers, specifically their opinion of the competency of AAVE speakers. Whitney (2005) suggests many strategies for teachers to attempt in order to incorporate AAVE into the classroom. One idea suggested is to have the teacher learn about AAVE (Whitney, 2005). A study by Sweetland (2005) supported the notion that if a teacher is more familiar and knowledgeable about AAVE, then the teacher will have a more positive opinion of AAVE. In this study, teacher participated in a 3-day workshop centered on how best to interact with students who speak AAVE. Throughout the workshop teachers were given information about AAVE and also information on how to incorporate what they learned in the classroom. Sweetland (2005) assessed teachers' attitude toward AAVE speakers before and after the workshop and found that teachers had a more positive attitude towards AAVE after the educational workshop. Sweetland's study concluded that educating the teachers about AAVE could be valuable in changing their negative opinion towards AAVE speakers. The current research suggests the following question: If many teachers are not familiar with social dialects such as AAVE, then why hasn't the contribution of social dialects to disproportionate representation been explored in depth?

Due to the paucity of research examining AAVE's relationship to disproportionate representation of AAVE speakers, there is an urgent need for further research to be conducted. Future research exploring the contribution that social dialects, especially AAVE, make to disproportionate representation of speakers of those dialects should be conducted. This particular future research should be conducted in a variety of locations to have a representative sample. Though this wide-scale research would be difficult, it is imperative to the success of students if more research on this topic were completed. Future research could also focus on finding a successful method that can be used to incorporate social dialects into general education classrooms. Research suggests that social dialects are used as a benefit during theater courses (Haviara-Kechaidou, 2008), but there is a lack of research on other school environments where social dialect speakers could use their dialect as a benefit. Further research could also

be conducted on the best way to encourage teachers to become better acquainted with the variety of cultures to which their students belong. This research could assess whether there should be an extra component on multiculturalism in the teaching certification process for all teachers or whether teachers would have to educate themselves via their own means.

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Comprehension of Natural Gesture Symbols vs. American Sign Language Signs with Low Iconicity

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Iconicity, the way in which signs and gestures relate to their meaning, plays an important role in comprehending certain types of communication. Iconicity of American Sign Language (ASL) and natural gesture symbols used in the context of speech are categorized as either low, medium, high, or opaque or translucent. The purpose of this study was to determine whether ASL signs or natural gestures were more easily understood by hearing participants. A video containing twenty ASL signs with low iconicity and twenty corresponding natural gestures was presented to twenty hearing participants who were instructed to identify what they thought each sign and symbol meant. Participants correctly identified significantly more natural gestures than ASL signs. These findings suggest that natural gestures may be more beneficial to teach to hearing individuals with speech-language delays to enhance communication effectiveness.

Introduction

Speech-language pathologists have used American Sign Language (ASL) as a means of enhancing communication for many decades. Not only is ASL used to enhance the communication of individuals with hearing loss, it is also taught to individuals with autism, apraxia, and many other speech-language disorders (ASHA, n.d.). For this reason, the American Speech-Language-Hearing Association (ASHA) has conducted numerous studies of ASL's effectiveness in enhancing communication with those who have speech-language disorders and limited oral skills (Johnston, Durieux-Smith, & Bloom, 2005; Schlosser & Sigafoos, 2006; Schwartz & Nye, 2007). Many of these studies have focused on the issue of iconicity, the way ASL signs and gestures relate to their meaning. Over the last four decades, iconicity has been studied in both ASL and typical gesture symbols; however, little research has been done to compare the extent to which receivers in a conversation comprehend gesture symbols as compared to low iconic ASL signs. This lack of research creates a problem for those with communication disorders because speech-language pathologists (SLP) teach basic ASL to these people with the expectation that they will communicate with others who may or may not know ASL. Although these ASL signs are meant

to be effective, the signs with low iconicity are difficult for individuals with cognitive impairments as well as those who are not fluent in ASL to comprehend. Teaching ASL signs, particularly those with low iconicity to individuals with speech-language disorders creates barriers in communication if those signs are not readily understood by others. Ultimately, this can result in those with speech-language disorders becoming voiceless. For these reasons, the present study will research comprehension rates in both natural gesture symbols and low iconic ASL signs to help determine the more effective communication techniques for those with speech-language disorders.

Literature Review

Johnston et al., (2005) and Schlosser & Sigafoos (2006) have researched ASL within the disability communities and Schwartz & Nye (2007) are among the latest researchers to study the use of ASL by individuals with Autism. These researchers have suggested that the overall effectiveness of this communication form is inconclusive. Using a total of twenty-two children between the ages of four to fourteen, the researchers examined the children's environment (home, school, and residential areas) and their language abilities prior to the ASL therapy that was provided during the study (Schwartz & Nye, 2007). The results suggested that the overall treatment (using ASL) had a moderate effect on enhancing the communication skills of those participants with Autism. However, due to the "single subject studies and treatment fidelity" (p. 12) the generalizability of the results beyond the participants of the study was limited (Schwartz & Nye, 2007). The results of the study suggested that there is no strong evidence supporting the use of ASL as a means to enhance the communication of individuals with Autism. Although some may argue that individuals with speech-language disorders will have at least some resources for communication by using ASL, others might claim that learning ASL can be of detriment to them as a result of withholding other means of communication.

Certain characteristics of signs may affect the ability to which users are able to memorize and comprehend them. Studies of the location of the production of ASL signs relative to the body (e.g., hand near the face, hand near the chest, etc.) indicate that the location of the sign has an effect on the ability to memorize the sign. Along with studies examining the relationship between ASL signs and the meanings of their corresponding words, Klima and Bellugi (1979) conducted further research to examine the relevance of the degree of iconicity and memorization. Moreover, Klima and Bellugi (1979) tested the idea that a sign may be easier to understand and produce depending on the degree of iconicity associated with the sign. The results of the experiment suggested that regardless of the level of iconicity of a sign, iconicity did not play a significant role in immediate memory. However in another study of the relationship between signs and immediate memory, signs which had formational properties (the similarity of hand-shape and location) were compared to those that had no similarity in form (Klima & Bellugi, 1979). The results of the study showed that formational properties have an effect on immediate memory (Klima & Bellugi, 1979) and confirmed that formational properties are needed more within ASL for

better processing. Additionally, studies of iconicity have found that ASL signs with high iconicity are representational of their meaning (Klima & Bellugi, 1979; Pizzuto & Volterra, 2000). In particular, Klima and Bellugi studied how iconic, or translucent signs are in relation to their meanings and have suggested that some signs are highly representational, which means that the signs relate closely to the meaning of the words. Their results confirmed the idea that there is a relationship between ASL signs and the meanings of the word (Klima and Bellugi, 1979). Further research on the relationship between iconicity and signs suggests that signs that seem arbitrary now may not have been in the past, but actually became more arbitrary over the years as the signs slowly moved to a slightly different location relative to the body. Klima and Bellugi (1979) suggest that the majority of signs at some point may have had high iconicity and still have the potential of being brought back to ASL as highly iconic signs. These studies are important because they suggest that signs with high iconicity are more intuitive and relatable to their meanings, much like natural gestures.

Likewise, research has suggested that like high iconic ASL signs, natural gestures that often accompany speech are also highly representational. Gestures are used the most during hesitations and problems with coding in speech. Butterworth and Beattie (1978) noted that by creating these gestures, humans are able to understand that there is a problem with the speaker getting a thought across to the listener, and in return the listener can determine the indicated message being sent out through these gestures (as cited by Streeck, 1993). This is a frequent phenomenon among people and plays an important role in communication because having the ability to understand what a speaker is trying to get across by comprehending the gestures being used in context repairs and improves many conversations. McNeill (1985) examined the relationship between gestures and speech as well as why gestures are made within a conversation. During experimental observations of participants as they told a narrative, McNeill (1985) suggested that gesture and speech are parallel within the mind, meaning they share parts of the same structure in the brain. In addition, McNeill (1985) suggested that gestures are symbols of words and relate to speech in terms of “time, semantics and pragmatic function” (McNeill, 1985 p. 287). This evidence emphasizes the importance and the role that natural gestures play in speaking.

Along with understanding the representational role gestures have in speech, studies have shown that there is a natural reason why humans gesture. Over the past four decades, researchers have claimed that within conversational speech, gestures perform pictorial roles and roles related to discourse in speech (Ekman & Freisen, 1969; McNeill, 1985). Having this information about why people gesture not only gives a full explanation of why certain actions are performed, but also helps suggest why gesturing is important for communication. Gesturing is a natural and universal way of communicating, and even when words are absent, gestures are there to substitute and provide context for information that needs to be communicated. For this reason, the present study will examine the comprehension rates of ASL signs with low iconicity and natural gestures in order to learn which are –more likely to be understood..

Gestures have an impact on normal child development and help to facilitate learning. An important milestone for infants is pointing, which occurs around the ages of seven to fifteen months (Tomasello, Carpenter & Liszkowski, 2007). Tomasello and Liszkowski suggest that through gesturing, infants are able to demonstrate the

“joint attention condition (Tomasello, Carpenter, & Liszkowski, 2007 p. 710)”. Infants cannot get what they need or want simply by pointing. They also need someone to respond to what they are pointing at. An infant learns through the act of pointing because their caretakers often show and explain to the child what it is he/she is seeking. Gesturing is not only an important part of language development, but the use of gestures helps to build a familiar bridge of communication between the people who interpret the gestures. In addition, McNeill (1992) suggests that children gesture in order to explain complex subjects. Unlike adults, who have the language and vocabulary to get a point across, children rely on their gestures to help others interpret a difficult idea (McNeill, 1992). These studies suggest that gesturing is natural in language development and necessary for learning how to communicate with others.

In addition, recent studies on gesture and word use have suggested that gestures help people with brain damage communicate more effectively (Raymer et al., 2006). Raymer et al., (2006) used four participants with aphasia to study the effects of using gesture and verbal (GV) treatment compared with using “semantic-phonological treatment (SP) for verb retrieval” (p. 867). The GV treatment consisted of a clinician presenting a word then modeling the target and gesture that was associated with the word. In return, the participants also had to model the word and gesture three times. The SP treatment consisted of the clinician presenting and modeling a target word and having the participants repeat the word three times. Although the research showed no significant findings in using the GV and SP treatment, the researchers suggested that GV use improved communication in 50% of the participants by totaling the number of correct responses given by them. The two participants whose gesture use was improved by the GV treatment had limb apraxia that caused deficits in voluntary movement (Raymer et al., 2006). In spite of the limb apraxia, the participants improved their gestures with training, thereby improving their overall communication (Raymer et al., 2006). This suggests that gesturing can enhance communication not only for individuals with lexical retrieval disorders, but also individuals who have problems with voluntary gesturing.

Previous research on iconicity and gestures suggest that gestures play an important role in everyday communication. This research also suggests that iconicity is a characteristic of ASL signs and gestures that give people the ability to understand them. In addition, previous studies have been inconclusive in their findings that the use of ASL by those that are speech-language and cognitively impaired improves communication. For these reasons, the purpose of this study is to examine the comprehension of both natural gesture symbols and low iconic ASL signs to help determine the more effective communication techniques for those with speech-language and cognitive disorders.

Methodology

ASL Sign Selection

For the purpose of this study, twenty ASL signs were selected using signs previously identified by Klima & Bellugi (1979) as having low iconicity. The following signs were selected: “please,” “egg,” “name,” “temperature,” “home,” “thank you,” “girl,” “candy,” “doll,” “socks,” “boy,” “mother,” “father,” “medicine,” “get,” “newspaper,” “help,” “wrong,” “thing,” and “every day.”

Creating the Natural Gestures

After IRB approval, the researcher recruited three Communication Disorders (CMDS) students from the graduate school to create the natural gestures that paralleled the ASL signs. The three CMDS students met in a standard university classroom and were provided with the following instructions: “I have selected twenty American Sign Language signs that have low iconicity. I will first tell you what the sign means and then demonstrate it for you. After you have viewed the sign, you can collaborate to create a more natural gesture for the sign. Immediately after deciding on the best natural gesture, I will video record you producing the gesture.” The researcher and the graduate students completed this task of creating twenty natural gestures for the twenty ASL signs with low iconicity.

Creating the ASL Sign/Gesture Video

Using a Canon Vixia HF R20 video recorder, the researcher videotaped one graduate student volunteer performing the natural gestures once they were collectively decided on by the group of three CMDS graduate students. After the recording of the natural gestures was complete, one graduate student videotaped the researcher signing the low iconic ASL signs. The natural gestures and ASL signs were videotaped in random order. After recording both the ASL signs and natural gestures, the researcher and one graduate student edited the video. Using iMovie, the natural gestures and ASL signs were repeated so that each sign and gesture was presented on the video three times in a row.

Selecting Participants to View the Video

In order to select participants to view the video, the researcher contacted faculty teaching summer classes and obtained permission to come to the class and ask students to participate in the study. The researcher provided a questionnaire for the participants to fill out in order to ensure qualification for the study. Recruitment criteria included: must be at least 18 years of age, enrolled in college, little to no knowledge of ASL, and not a Communication Disorders major.

Participants

The participants were instructed to fill out a questionnaire indicating their age, major, year in school, if they had ever been diagnosed with a hearing loss and approximately how many ASL signs they knew. Out of the twenty-one participants, only twenty of them qualified for the study. The majority of the students were male (11:9) and the average age was twenty years old. There were no first year students

involved in the study and 10/20 (50%) of the participants were seniors (fourth or fifth year). Eight participants were juniors (third year) and two participants were sophomores. There were ten different majors among the participants and some of the participants had two majors. The following is the list of majors: Linguistics, Mathematics, Computer Science, Biology, Accounting, Business, Finance, Economics, Psychology, and Music. The most frequently represented majors were Accounting and Music, with five students declaring each.

Table 1. Participant Demographics

Major	Frequency	Year in School	Frequency	Known ASL	Frequency
Accounting	5	Senior (4th/5th yr)	10	0-10 Signs	15
Biology	1	Junior	8	10-20 Signs	2
Business	3	Sophomore	2	20+ Signs	1
Computer Science	1	Freshman (1st yr)	0	N/A	2
Economics	2				
Finance	4				
Linguistics	1				
Mathematics	3				
Music	5				
Psychology	1				

After the participants completed the questionnaires the following instructions were given: You will be presented with a video that contains one person signing twenty American Sign Language signs and another person presenting natural gesture symbols. Each sign and gesture is presented in random order and will appear three times in a row. Although the signs or gestures may look like an action composed of a verb and a noun, the meaning is only actually one word. For example, the sign or gesture may look like “making tea” however the meaning is only the word “tea”. When you see the sign or gesture and believe you know what the sign or gesture means, you may write it down on the numbered blank pertaining to the sign. If you are unsure, you may leave the line blank, however, it is strongly preferred that you do your best to place an answer in the blank, even if you think you are wrong.” The researcher then presented the video to the participants. The participants were shown the video in three different groups on separate days. Two of the three groups took part in the study in classrooms in which their previous class was held. The remaining group participated in a university dorm study room. The overall study took approximately ten to fifteen minutes which included time for explanation by the researcher, filling out the questionnaire, answering any questions asked by participants, and watching the video.

Data Analysis

In order to draw a conclusion, the researcher compared the number of low iconic ASL signs identified correctly by participants to the number of natural gestures identified correctly. The data was analyzed using the IBM SPSS Statistics v.20 program. A paired t-test was calculated to compare the average number of ASL signs identified correctly to the average number of natural gestures (NG) identified correctly

Results

A paired-samples t-test was conducted to compare the number of ASL signs correctly answered to the number of natural gesture symbols correctly answered (Tables 2 & 3) There was a significant difference in the scores for ASL ($M = .6500$, $SD = 1.13671$) and natural gestures ($M = 2.3000$, $SD = 1.94936$); $t(19) = -.93335$, $p = .000$. The findings suggest that the group of 20 hearing participants interpreted the intended meaning of natural gestures more successfully than they were the ASL signs.

Table 2. SPSS Results for Paired Sample

Variable	Number of Pairs	Corr	2-Tail Sig.	Mean	SD	SE of Mean
Score ASL	20	.620	.000	.6500	1.13671	.25418
Score NG				2.300	1.94936	.43589

Table 3. Pair Differences

Mean	SD	SE of Mean	t Value	df	2-Tailed Sig.
-1.65000	1.53125	.34240	-4.819	19	.000

Discussion

The purpose of this study was to examine the rate of comprehension between American Sign Language signs and natural gestures. ASL signs are often taught in therapy to those who have speech-language and/or cognitive disorders. However, the findings of this study suggest that natural gestures may be easier than ASL signs for hearing individuals to comprehend. Given this finding, it might be more beneficial for SLPs to teach natural gestures to specific clients in order to facilitate more effective communication. A few examples of such clients are people with aphasia, autism, and stroke victims with limited speech. Not every client should use natural gestures as a means of communication. For example, individuals who are deaf and plan to acculturate in the Deaf community should be taught ASL as a primary means of communication. However, non-hearing impaired individuals who are slow to acquire speech and/or language or are limited in their ability to develop a complex language system may benefit more from acquiring and using natural gestures rather than formalized ASL signs. For example, children who are identified as late talkers may benefit from the use of natural gestures rather than ASL signs. Children may find it difficult to link

meaning to signs with low iconicity and it may be equally challenging for caretakers to understand what the signs mean. The findings of this study suggest that natural gestures might be more easily understood by listeners who have no knowledge of American Sign Language.

The results from this study also support the claim that the ASL signs chosen for use in this study were associated with low iconicity because the majority of the viewers did not correctly identify what the ASL signs meant. For example, no participants correctly identified the ASL sign for “medicine”. However, when the participants were presented with the natural gesture symbol for the word “medicine,” seven of twenty (35%) viewers correctly interpreted the sign. Likewise, similar results were obtained with the ASL signs “egg,” “newspaper,” “temperature,” and “candy.” None of the participants identified these four ASL signs correctly, while four or more participants identified the natural gesture for “egg,” “newspaper,” “temperature,” and “candy”. These findings suggest that the natural gestures may have been more iconic than their corresponding ASL signs. However, not all natural gestures in the study were easily identified by the participants. This information suggests that although natural gestures may be considered to have higher iconicity than certain ASL signs, there has to be a common understanding of what is intuitive before a word can be considered highly representational of its meaning. For example, the demonstration of cracking an egg and putting it into a skillet is what could have made the natural gesture for “egg” highly iconic. However, the demonstration of having an enlarged belly and then folding one’s arms to symbolize a baby was not considered to be a highly iconic natural gesture representative of the word “mother.” While the action was iconic because it was related to the meaning of the word, it may not have been iconic enough to relate to everyone’s common ideas of what a mother is or does, therefore inhibiting the natural gesture to be recognized and correctly identified by the participants. However, participants often identified the natural gesture for “mother” as “baby” which suggests that the common understanding of the word “baby” is related to an enlarged belly or folding ones arms to symbolize a baby.

This finding demonstrates that in order to consider a natural gesture or ASL sign to be highly iconic there has to be a general understanding of the common use of the word or phrase for a variety of populations. It is likely that what is iconic to some individuals may not be for others, depending on age, culture, gender, and/or other individual characteristics. For example, when considering a gesture for the word “time”, an older individual may find the gesture of looking at one’s wrist as highly iconic, while a younger person may find the gesture of checking one’s cell phone more iconic of the word “time”. Cultural differences may also impact iconicity. For example, the natural gesture for the word “medicine” was associated with a greater number of correct responses than the ASL sign for “medicine”. In Western civilization the common understanding of medicine can be depicted through pretending to shake pills into the palm of one’s hand and put them into their mouth. However, this may not be the common understanding in other cultures. For this reason, it may seem that the natural gesture for “medicine” used in the study has high iconicity for American culture, but in a different culture where medicine is associated with natural techniques like herbs and praying, the action of shaking pills out of a bottle may seem less iconic and, therefore, not as intuitive. Understanding these generational

and cultural differences is what identifies a natural gesture as having high iconicity and could potentially have an impact on what SLPs teach in therapy to clients who are speech-language and/or cognitively impaired.

Limitations

This study had certain limitations. First, although the participants were instructed to fill out a short demographics questionnaire about their age, major, and experience with ASL, the researcher did not ask for the “nationality” of participants. One participant mentioned in the questionnaire that they were an international student and, therefore, had problems understanding both the ASL signs and the natural gestures. The involvement of international students is a limitation because the sign language presented was American Sign Language and the natural gestures may have had American cultural implications to them. Since the participants were not asked about their nationality, it is unclear how many of the participants may have been international and what affect this may or may not have had on the findings of the study.

Another consideration to take into account is the discrepancy among participants regarding how many ASL signs they had been previously exposed to and knew before taking part in the study. Participants were asked to provide a range of how many ASL signs they knew (0-10, 10-20, 20 or more) by indicating on the given questionnaire, however, a few participants neglected to fill this section out. Incomplete information about how many ASL signs some of the participants knew makes it difficult to know for certain whether participants correctly identified some ASL signs because they knew them previously or because they were able to figure them out based on their representational qualities. Regardless of the fact that a few participants neglected to report the number of ASL signs they knew, very few people correctly identified the ASL signs.

In addition, the data in this study was collected from participants at a college campus with the average age of participants being 20 years old. Although the results were significant to this population, the findings cannot be accurately generalized to other age groups.

Finally, although the findings of the study showed significance, the limited number of participants prevented the researcher from being able to compare the ASL signs to natural gestures on an item-to-item basis. With a larger subject sample, the researcher would have been able to study the differences between specific ASL signs and gestures.

Future Research

It is important to replicate and extend this study in order to draw additional conclusions about the rate of comprehension of ASL signs and natural gestures. By doing so, more evidence to support the use of ASL signs and/or natural gestures in therapy when attempting to bridge communication gaps for those with speech-language and cognitive disorders may be found. Moreover, further research should assess a common understanding of words and actions in cultures of a given study. By doing so, the researcher will be able to more easily identify what natural gestures would be considered iconic and representational to participants. Also, further research should examine other age groups, such as geriatric and pediatric, in order to better generalize results to specific populations.

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Appendix A

Informed Consent Document

Project Title: Comprehension of Natural Gesture Symbols vs. American Sign Language Signs with Low Iconicity

Principal Investigator: Kylie Warner, Communication Disorders, Student

Co-Investigator(s): Dr. Janet Gooch

WHAT IS THE PURPOSE OF THIS STUDY?

You are being invited to take part in a research study designed to compare the comprehension of ASL signs with low iconicity to natural gesture symbols. The researcher suggests that natural gesture symbols will be easier to understand than ASL signs with low iconicity. We are studying this because this information may help identify additional methods for enhancing communication skills in different populations. At the end of this study, the researcher will use the information collected to present at conferences and possibly build upon in further education.

WHAT IS THE PURPOSE OF THIS FORM?

This consent form gives you the information you will need to help you decide whether to be in the study or not. Please read the form carefully. You may ask any questions about the research, the possible risks and benefits, your rights as a volunteer, and anything else that is not clear. When all of your questions have been answered, you can decide if you want to be in this study or not.

WHY AM I BEING INVITED TO TAKE PART IN THIS STUDY?

You are being invited to take part in this study because you have little to no knowledge of American Sign Language and your area of study is not Communication Disorders.

You must be 18 years or older to participate in this study.

WHAT WILL HAPPEN DURING THIS STUDY AND HOW LONG WILL IT TAKE?

During this study, you will be asked to watch a video of a student demonstrating either American Sign Language Signs or natural gestures. The signs and gestures are being presented randomly in the video and will be repeated three times each. On the answer sheet numbered 1-40, please write in the blanks what you think the signs or gesture means. If you are not sure, do not write on the line. If you agree to take part in this study, your involvement will last for approximately thirty minutes.

WHAT ARE THE RISKS OF THIS STUDY?

The possible risks and/or discomforts associated with the procedures described in this study include: the participants may feel uncomfortable with this study due to frustration, agitation, anxiety and other emotions that may accompany the idea of being tested. However, if the participants feel uncomfortable, they may withdraw from the study at any time without any consequence. In addition, the participants

have a risk to loss of confidentiality in this study. In order to minimize these risks, the questionnaire and answer sheet will only use random number codes for identification and will be stored in a locked file cabinet after the participants have concluded the activity.

WHAT ARE THE BENEFITS OF THIS STUDY?

We do not know if you will benefit from this study. However, we hope that, in the future, other people might benefit from this study because individuals with language disorders will be able to communicate better with their family, peers, and community.

WILL I BE PAID FOR PARTICIPATING?

You will not be paid for being in this research study.

WHO WILL SEE THE INFORMATION I GIVE?

The information you provide during this research study will be kept confidential to the extent permitted by law. To help protect your confidentiality, we will use identification codes only on the answer sheet and the results will only be seen by the researcher and the researcher's supervisor.

If the results of this project are published your identity will not be made public.

DO I HAVE A CHOICE TO BE IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

You will not be treated differently if you decide to stop taking part in the study. On the attached questionnaire feel free to skip and questions you do not feel comfortable answering.

WHAT IF I HAVE QUESTIONS?

If you have any questions about this research project, please contact: Kylie Warner, (816) 383-4091, kmw5771@truman.edu. Dr. Janet Gooch, jquinzer@truman.edu.

If you have questions about your rights as a participant, please contact the Truman State University Institutional Review Board Administrator, at (660) 785-7245 or by email at Grants4Truman@yahoo.com.

Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Participant's Name (printed): _____

(Signature of Participant)

(Date)

Appendix B

American Sign Language Questionnaire

ID #

Date:

Instructions

Read each question carefully and then circle the answer that best pertains to you. Please answer as accurately and honestly as possible.

Part I: Basic Information

1) Are you at least 18 years of age?

a. Yes

b. No

Age

2) Please specify your gender

a. Female

b. Male

c. N/A

3) Are you currently enrolled as a college student?

a. Yes

b. No

c. N/A

4) Are you a Communication Disorders major?

a. Yes

b. No

Major/Year

5) Have you ever been diagnosed with a hearing loss?

a. Yes

b. No

c. Not sure

d. N/A

Part II: American Sign Language

1) Have you ever taken an American Sign Language class?

a. Yes

b. No

c. Not sure

- 2) Have you taken an American Sign Language class in the last 5 years?
 - a. Yes
 - b. No
 - c. N/A
- 3) Do you consider yourself fluent in American Sign Language?
 - a. Yes
 - b. No
 - c. Not sure
- 4) Approximately how many American Sign Language signs do you know?
 - a. 0-10
 - b. 10-20
 - c. 20+
- 5) Do you have any comments to mention that you feel may impact the results of this study?

Appendix C
Gesture/Sign Answer Sheet

1. _____	21. _____
2. _____	22. _____
3. _____	23. _____
4. _____	24. _____
5. _____	25. _____
6. _____	26. _____
7. _____	27. _____
8. _____	28. _____
9. _____	29. _____
10. _____	30. _____
11. _____	31. _____
12. _____	32. _____
13. _____	33. _____
14. _____	34. _____
15. _____	35. _____
16. _____	36. _____
17. _____	37. _____
18. _____	38. _____
19. _____	39. _____
20. _____	40. _____

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