

GENDER BIAS IN NATURAL GENDER LANGUAGE AND GRAMMATICAL  
GENDER LANGUAGE WITHIN CHILDREN'S LITERATURE

by

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Liberty University

A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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## ABSTRACT

There has been much research on the connection between language and gender bias but there is little comparing natural gender language, grammatical gender language, and gender bias. This research is important because it can offer an understanding of gender bias and how these biases are reinforced in different languages. The purpose of this study is to understand how gender biases are represented in children's literature in different languages. The research questions how gender biases are found in both natural gender and grammatical gender languages within children's literature. Then questions if there are any differences in these biases. This study compared gender biases within children's literature in the natural gender language and the grammatical gender language. The study used the New York Public Library's Best Books Lists for 2022 and 2021. For the natural gender language, it used English books from the lists. For grammatical gender languages it used Spanish. The study analyzed each book's main character's gender, target audience, and whether they are enforcing gender stereotypes. The results revealed that there are more similarities than differences in gender bias within natural gender language and grammatical gender language.

*Keywords:* gender bias, grammatical gender language, natural gender language

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## **Dedication**

To my little family of three that was created while working towards this degree.

## **Acknowledgments**

I would like to thank my husband, Mike, who has patiently supported my long nights studying and writing this dissertation. I am glad that we are now spending our long nights together reading to our baby girl, Sydney.

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## CHAPTER 1: INTRODUCTION TO THE STUDY

### **Introduction**

“Gender is the poetry each of us makes out of the language we are taught” (Feinberg, 1998). The purpose of this research was to understand how gender bias is developed through language. The topic of this study was focused on how gender bias is shown through gender languages. Gender is shown within the human language in the form of nouns, verbs, and/or pronouns that correspond to female and/or male versions of specific words (DeFranza et al., 2020). Gender bias is understood once gender is understood within a language (Smolik & Blahova, 2019). Each language consists of a degree of gendered language. These degrees consist of grammatical gender language, natural gender language, a combination of grammatical gender and natural gender, and genderless language (Prewitt-Freilino et al., 2012). This research focused on comparing gender bias within grammatical gender language and natural gender language. Specifically, it compared English children’s literature to Spanish children’s literature. This research is meaningful because it supports the idea that a person develops their concept of gender through their native language. It is important to understand this because it can offer insight into why humans have biases towards one gender over the other and how these biases are reinforced.

### **Background**

As children learn their native tongue, they learn how their culture understands gender and its biases, especially favoring the masculine gender (Vigliocco et al., 2005). A language system is known to be a source of implicit gender bias (von der Malsberg et al., 2020). These biases tend to lead to gender stereotyping which is the belief about a characteristic of a group, as well as prioritizing men over women. Even though there are

hundreds of different languages, research has found that gender bias is shown within all of them to some degree by way of grammar (Gygax et al., 2019).

### **Grammatical Gender Language**

Grammatical gender languages, also known as gendered languages, are ones in which nouns are designated to be either the female or male gender, with few neutral exceptions (Prewitt-Freilino et al., 2012). The nouns can even vary between genders when they are referred to by people to reflect the person in question's gender. There are also other elements of the sentences, such as articles which must coincide with the gender of the noun or nouns being used (Smolik & Blahova, 2019). These languages are typically referred to within the linguistic groupings of Germanic, Semitic, Slavic, Indo-Aryan, and Romantic. The Spanish language this research will focus on is considered a romantic language that falls within the grammatical gender language category.

### **Natural Gendered Language**

Natural gender languages do not represent their grammar by a person's gender and most of the nouns, with some exceptions, are considered genderless (Gygax et al., 2019). Instead, gender is characterized through the language's pronouns (Prewitt-Freilino et al., 2012). These personal pronouns determine whether the noun refers to someone whose gender identity or sex is female or male. There are also some exceptions in which few personal nouns reveal one's gender, for instance, widow and widower (Belbo et al., 2020). English, Swedish, and Norwegian are different forms of natural gender language (Gustafsson et al., 2015). This study will focus on the English language when researching natural gender languages.

### **Scientific Foundation**

Much of the current research consists of determining the differences between the languages and even forming an index on how gender varies throughout human language (Gygax et al., 2019). There have also been extensive studies that have shown that the level of gender prejudice has been associated with the degree of gender within languages (DeFranza et al., 2020). This research shows different ways gender is reinforced through various forms of media.

While there is research that focuses on prejudice, there is also research that focuses on languages in terms of gender. For example, children whose native language is the grammatical gender language of Spanish have shown a gender bias toward using masculine words (Beatty-Martinez & Dussias, 2019). This is believed to represent many grammatical gender languages because these languages tend to have a masculine generic for nouns or pronouns, or even when there is a group of females with one male in it. Studies have also shown that grammatical gender languages tend to create societies with a greater emphasis on gender inequality than natural gender language societies (Harris et al., 2017). Even native genderless-speaking languages have more liberal views regarding gender and gender equality (Perez & Tavits, 2019).

As for natural gender languages, research has shown that those speaking the English language are expected to include the category of gender within their grammar (Hilmisdottir, 2020). This teaches children to understand the significance of using pronouns as it reinforces the concept of gender. Studies have also shown that countries that speak natural gender languages are actively working toward teaching children gender-neutral terms (Wallner & Eriksson, 2022). Only in recent years has there been the teaching of gender-neutral terms to children, which has been shown to help break down

gender roles since typically, even in the English language, children tend to refer to non-gender-specified literary characters as male (Bailey et al., 2020).

There have been many research studies involving reinforcing gender stereotypes through various forms of media content. Analyzing books, movie synopses, and movie scripts in the English language, it was determined that words written describing female and male characters are more likely to show that females are focused on relationships and males are focused on an adventure (Xu et al., 2019). Similar research has shown that the main characters are most likely to be males and are more likely to be considered more powerful than the female characters (Aley & Hahn, 2020). Lastly, another study focusing on Disney princesses in the English language has shown that children who are shown this type of content are more likely to encompass the gender stereotypes depicted in the characters than those who do not (Golden & Jacoby, 2018).

### **Biblical Foundation**

There is a strong biblical foundation for the study since it focused on the idea that “there are many languages in the world and none of them are without meaning” (*King James Bible*, 1769/2017, 1 Corinthians 14:10). This research focused on finding the meaning behind how gender is learned through the languages throughout our world.

The Biblical foundation of this research is relevant because according to the Bible, in the beginning, all humans spoke one language and as punishment for their sins, God created many languages all over the world (*King James Bible*, 1769/2017, Genesis 11:1-9). Studying these divisions God created as punishment can help us understand how He divided the world as well as help humans understand Him more by learning how He originally intended humans to be before the Tower of Babel.

There is also a biblical foundation of the construct of gender. This foundation comes from the beginning of Creation in the Garden of Eden, where God made the first humans. Even Adam decided to call Eve a woman because she was created from parts of a man (King James Bible 1769/2017, Genesis 2:23). This helps signify that the masculine gender was the first. This represents the foundation of the world is biased toward the first gender over women. As for biblical research, Mojola (2018) compared various translations of the Bible and studied how these variations can represent gender differently. This shows that infants learning their native language through their parents reading them the Bible can instill Christian values and the values of how gender is placed within their society.

### **Problem Statement**

Little is known about how gender bias is created through learning a native language (Smolik & Blahova, 2019). Children's media such as books, movies, and television shows have been known to help develop their sense of gender bias through words (Xu et al., 2019). A content analysis of children's media in the United States over the last 80 years has shown that main characters tend to be male and are considered more powerful than female characters (Aley & Hanh, 2020). Research on social cognitive theory suggests that preschoolers interpret what they see in characters within media into their understanding of gender roles (Golden & Jacoby 2018).

There needs to be more research on the degree of gender in a person's native language affects how gender biased they are because these distinct differences behind gender are linguistically relevant and are found in all human languages to certain degrees (Gygax et al., 2019). Languages that have a higher prevalence of gender are shown to have more gender prejudice than those that do not (DeFranza et al., 2020). Specifically,

the grammatical gender language of Spanish has been shown to have greater gender prejudice on the internet websites Common Crawl and Wikipedia than the English language. Spanish was selected because it is a grammatical gender language that could be generalized to other similar languages, such as Italian, French, German, etc. There has even been research that has found that when bilingual adolescent speakers read in the grammatical language of Spanish, they form more sexist attitudes toward the reading than when they read something in English (Wasserman & Weseley, 2009). Natural gender languages, such as English are also more likely to include neutral terminology within current society which is known to lead to a reduction of male bias (Lindqvist et al., 2019).

Even though there is much research on gender bias and language, there has been little research comparing the grammatical gender language of Spanish to the natural gender language of English in general and especially within the realm of children's literature. Focusing on comparing English and the Spanish language is important because in Spanish it is more common for a speaker to omit the subject within a sentence more often than an English speaker, which forces children to learn verb conjugation even earlier than English-speaking children to make it necessary to understand who is being referred to in the language (Longobardi et al., 2019). Learning more verb conjugation at an earlier age in Spanish may show an increase in gender knowledge and potential biases because each conjugation is related to gender.

There also needs to be more research on children's literature because it is one of the oldest literary genres and is a valuable part of early education (Kim & Hachey, 2021). Because of its importance, there needs to be more research comparing gender stereotypes between languages as well as if one language's literature tends to have more male than



female characters. This research is important because it helps researchers understand how the language a person is speaking affects their biases towards gender. If the origins of biases are well understood, then future research can focus on ways to eliminate them. The problem is that there needs to be more research on how a native language creates gender bias.

### **Purpose of the Study**

The purpose of this quantitative content analysis study was to compare how gender bias is shown in natural gender language and grammatical gender language within the context of children's literature. This study has researched gender biases found in the natural gender language of English to the grammatical gender language of Spanish. It focused on androcentrism, pronouns, and words to describe the male and female characters.

### **Research Questions**

RQ1: In what ways are gender biases found within natural gender language within children's literature?

RQ 2: In what ways are gender biases found within grammatical gender language within children's literature?

RQ 3: What are the differences, if any, in gender biases in children's literature between natural gender language and grammatical gender language?

### **Assumptions and Limitations of the Study**

This study had several assumptions and limitations on gender bias and language. The key challenge of this study was that there are over 7,000 languages and 100 sign languages (Vigliocco et al., 2005) and this study only focused on English and Spanish. Another challenge was that there are five different forms of gendered language. This

study only compared two forms, the grammatical gender language of Spanish and the natural gender language of English. Even with comparing English and Spanish, the study only focused on children's literature, although children also learn language from their caretakers, television, movies, etc.

This study assumed that the Spanish language would have more instances of gender bias than English. This is assumed because Spanish has grammatical gender specifically nouns, adjectives, and verbs. It is also assumed that in both languages the stories' instances of gender bias will favor men over women due to constant research showing this (Gygax et al., 2019).

### **Theoretical Foundations of the Study**

The theoretical foundation of this study drew from theories of social cognitive theory, language development, and gender development. Social cognitive theory is that we learn from our social interactions and that is how we understand our world, in this case, the idea of gender from learning a language (Setién-Suero et al., 2022). This theory consists of mental processes that lie beneath interactions with others, such as understanding social norms, interpersonal relationships, and how one perceives oneself and others. This research was supported by social cognitive theory because when a person learns a language and develops gender bias, they begin to understand the world around them and how to interact with others. Within the social cognitive theory, it is also believed that mass media observers also vicariously learn bias and stereotypical gender roles by observing female and male characters being rewarded or punished for portraying themselves against gender role expectations (Aley & Hahn, 2020).

The theory of language development is that multiple processes are involved to acquire language. The beginning of language development, nouns, verbs, and adjectives

in an infant's early vocabulary implies that a child creates a meaning to draw onto different word forms (Hoff & Shatz, 2007). As an infant's vocabulary rapidly expands, so does the number of errors within their speech but the more a word is practiced, the stronger and more resistant an infant becomes to obstruction from lexical errors (Gershkoff-Stowe, 2002). At the same time, infants also gather a basic understanding of categorization, which improves by the time they turn two (Hoff & Shatz, 2007). Learning to categorize words helps them begin to separate gender from other categories they know. This understanding of the category of gender is also reinforced by their caregivers. The child's caregiver uses the proper gender agreement within their native language, whether it be the correct verb, noun, or pronoun, and corrects the child if they do not speak the words properly (Smolik & Blahova, 2019).

Within the theory of language development is Noam Chomsky's Language Acquisition Device (LAD). Chomsky's LAD is the idea that there is an internal need for language learners to understand language (Blackwell, 2006). Chomsky believes that this internal representation allows the language learner to learn a language by acquiring an understanding of grammatical categories (Frost et al., 2019). Even though this device is internal, Chomsky does believe that there needs to be some exposure to the language itself.

Gender development theory is the idea that gender is dynamic and socially constructed (Tripp & Munson, 2021). Also, gender is usually considered a dichotomy within language, but it is more complex because there are different variations than only the male and female genders (Lindquist et al., 2021). Language provides labels to communicate and solidify the concept of gender. Each language is categorized into either natural gender, grammatical gender, genderless, or a variation of the three, which helps

reinforce gender to develop (Gygax et al., 2019). This theory is crucial for the research because learning one's native language, they are learning what gender means in that language, as well as bias towards a specific gender is acquired.

Within gender theory, there is the Cinderella complex by Colette Dowling (Xi et al., 2019). The Cinderella complex is the idea that stories from one's culture, whether it be books, movies, or television, construct gender stereotypes into the mores of these stories. These gender stereotypes then perpetuate gender inequality, the idea that women fear independence and that women have an unconscious yearning to be taken care of by the men in their lives. These stories use not only the plots themselves but also the words to describe the women and men reflect gender stereotypes as well.

As for the biblical perspective of this study, research indicates that the Bible is a significant source of gender bias. Since it has been reproduced in many languages, the Bible has been able to spread the concepts of androcentrism and that God favors men over women (Mojola, 2018). The Bible is also an example of literature read to children and represents a way that gender bias is reinforced by parents reading to them.

### **Definition of Terms**

The following is a list of definitions of terms that were used in this study.

**Androcentrism** - the inclination to prioritize men as neutral while referring to women as the other gender (Bailey et al., 2019).

**Gender** – is a complex concept established by biological, cultural, and linguistic components, which builds upon social stereotypes, thoughts, and identity (Mazzuca et al., 2020).

**Gender bias (in the context of language)** – when a language shows a preference for a particular gender (Lindqvist et al., 2019).

**Gender stereotype** – associating a category such as a gender with traits that are typically assumed by that category (Kollmayer et al., 2018).

**Grammatical gender languages** – languages where inanimate objects and personal nouns are categorized by gender (Gygax et al., 2019).

**Natural gender language** – personal pronouns differentiate gender and inanimate objects are not categorized by gender (Gygax et al., 2019).

**Pronouns** – a form of grammar that helps identify the speaker or to whom they are speaking (Longobardi et al., 2019).

**Syntax** – the structure of words that create a well-formed thought in a language (Blackwell, 2006).

### **Significance of Study**

This research can help expand the fields between psycholinguistics and gender studies which have been growing topics in recent years. If significant findings are found within this research, it can help support the concept that grammatical gender languages promote more gender bias within their language than natural gender languages. This realization could hopefully help support the movement towards decreasing gender bias within these language-speaking areas and creating less androcentrism. It could also enable new authors of children's literature to realize that they should be mindful of gender bias within their writing.

If authors do decrease this gender bias, it could lead to children seeing gender in a different light. This change in the perception of gender could lead to great gender equality for generations to come because research has shown that language has significant consequences for society's opinion on gender equality, which can help women politically (Perez & Tavits, 2019). This increase in gender equality can in turn lead to

greater representation of women in politics and a greater focus on policies that directly affect women.

This research could also become a foundation for comparing languages to one another in terms of gender bias. It could help provide future attempts to analyze other types of gender languages even further than they already are within gender language indexes that focus on the grammatical classifications of gender (Gygax et al., 2019). This is important because even though gender language indexes compare the degree of the language that is used, there needs to be more in the context of how languages describe the genders differently within stories as well as use androcentrism.

### **Summary**

Learning a language is connected to how a person understands gender in their society. They learn not only how gender is constructed socially but also how one gender is placed above the other. Current research examines how each language has a degree of gender within it, whether it is grammatical, natural, genderless, or a combination (Gygax et al., 2019). This study adds to exciting research on gender bias within language by focusing on two different languages and how they represent gender within early children's literature.

The next chapter will address a review of current literature, as well as the biblical foundation on the topic. The following section includes the subtopics of gender development within cognition, gender bias, stages of cognitive development, social cognition, culture and socialization, development of word comprehension, development of speech, intrinsic features of language and gender, degrees of gender language, bilingual first languages, children's literature, and reinforcing gender bias language. It will also address how the Bible reinforces gender bias within language.

## CHAPTER 2: LITERATURE REVIEW

### Overview

Language is a key part of the human species, allowing us to express our thoughts and influence those around us (Perszyk & Waxman, 2019). Within each of the many languages of humans are the concepts of gender which are learned at an early age. There are several ways in which each human language represents an awareness of gender but there are specific ways in which children learn it.

Developing an understanding of the concepts and objects associated with gender is another part of what makes humans stand out in this world. The development of gender association as well as the labeling of gender has been shown in children younger than three years old (Prystawski et al., 2022). These gender associations are quite prevalent, especially when one is in the phase of early childhood. Research has established that the language's system of gender tends to be cognitively processed during the third year of life when a language has a nominal gender (Smolik & Blahova, 2019). To fully comprehend what gender is in terms of a person's world, they must develop the language through the meaning of words as well as how to speak their native tongue through various cognitive processes. The specific language a child learns can hold the basis for understanding gender.

The word of the Lord in Acts 2:8, "How to hear we every man in own tongue, wherein we were born?" describes how those around us help us create our language (*King James Bible*, 1769/2017). It is important to recognize how an infant develops the concept of gender through language comprehension and speech in their language, as well as how their physical ability to comprehend language, the Bible, culture, and their native language plays a part in their understanding of gender.

The literature review will focus on cognitive development, social cognition, development of word comprehension, gender bias, and how the Bible affects this development. This review will also focus on the different degrees of gender languages there are and how that impacts a person's development. Though there is extensive research on these topics, there is still a gap in research on how gender is portrayed differently within children's literature depending on what language it is. This quantitative research will be conducted to examine this gap in the existing literature.

### **Description of Research Strategy**

To collect peer-reviewed literature on gender bias, natural gender language, and grammatical gender language, the search was performed using the online databases EBSCO, PsycNET, Taylor & Francis Online, SAGE, PMC PubMed Central, and ScienceDirect. The top search terms were gender bias, gender language, grammatical gender language, natural gender language, cognitive development, gender development, and gender bias in children's literature. Each result was then narrowed down even more using the advanced search engine feature. The advanced search engine features included selecting the "full text online" and "peer-reviewed" options, then a publication of the last five years. Some references are older than five years, found via required readings from courses taken throughout the Liberty University Doctoral program.

Within the biblical research, the search consisted of gender bias in the Bible and gendered language in the bible. The biblical research resource consisted of using the website <https://www.kingjamesbibleonline.org/> to find direct biblical quotes. As for the peer-reviewed biblical research that is less than five years old, EBSCO, PsycNET, Taylor & Francis Online, and SAGE were also used. The search terms for this research were the Bible and gender bias, Bible and gendered language, and Bible and gender.



## **Review of Literature**

### **Gender Development within Cognition**

Gender is understood within one's cognition. Though gender in some way exists in over 7,000 languages and 100 sign languages, there are specific ways a person's cognition understands gender (Vigliocco et al., 2005). The developmental group theory proposes that the prominence of gender all around a child's social world leads to their ability to categorize other people by their gender (Halim et al., 2017).

Within gender cognition, there are key concepts that help people understand the concepts of gender. Gender stereotype is the cognitive side of intergroup bias with two subcategories, blatant and subtle (Taylor & Fiske, 2021). Gender identity is which gender a person views themselves as; this develops at an early age and is tied to not only self-perception but how others interact with the child (Aley & Hahn, 2020). A fundamental concept is gender rigidity which is the idea that gender is unchanging, and people should follow specific gender roles; this thought process is typically shown during early childhood (Halim, 2016).

Another concept is gender constancy which is the understanding that one's gender does not change over time (Halim et al., 2017). Gender constancy is the final stage of gender cognition because a person is realizing that if they do something that is not related to their stereotypical gender (i.e., a girl wearing boy clothes or boys playing with girl toys), their gender does not change (apart from transgendered individuals, of course). This final knowledge of gender constancy shows that children have developed a flexible way of thinking because they start to understand that a person's gender remains the same even when their appearance can change (Halim et al., 2017). For example, a person can

still consider themselves a boy even if they are wearing a dress; they can still define themselves as a boy. These concepts lead to certain biases toward gender in our society.

### **Gender Bias**

Bias attitudes are favoring one's group above other groups (Halim, 2016). A person tends to view their group as the ingroup more positively while viewing the group they do not belong to, otherwise known as the outgroup as less than others (Fiske & Taylor, 2010). Gender bias is a unique form of prejudice against an outgroup because it affects half the world's population.

Even though ingroup (men) and outgroup (women) depend on each other as a means of survival, most cultures represent males as the dominant group (Fiske & Taylor, 2021). This biased attitude leads to the exclusion of women which tends to result in increased gender stereotyping and gender-stereotypical behavior (Halim, 2016). The realization of ingroups and outgroups of gender is all around a child's world and impeded in diverse ways through language such as pronouns and speaking to a person based on their gender (Halim et al., 2017).

There are a few different types of stereotyping that lead to bias between the genders. A blatant stereotype is a form of stereotyping when a person explicitly communicates favoritism or outgroup derogation from perceived intergroup threats (Fiske & Taylor, 2021). This form of bias is less common but can lead to a dangerous situation for minorities, in the case of women. Since blatant stereotyping has become taboo, there is also subtle stereotyping which has appeared starting in the last century (Halim et al., 2017).

Subtle stereotyping is based on an inner conflict between anti-prejudice norms and cultural stereotypes and can be measured implicitly by using priming methods such

as having the people use word association with images (Hewstone, 2002). There are three types of subtle stereotyping: automatic, ambiguous, and ambivalent. Automatic subtle stereotyping is when people involuntarily mistake other individuals within groups, and these misperceptions tend to lead to stereotyping the person (Fiske & Taylor, 2021). Automatic subtle stereotyping can be seen within gender when one person dresses like the opposite gender and gets called by that other gender. Ambiguous subtle stereotyping is the situation when an individual interprets knowledge to fit their expectations and conceals these understandings for themselves and others (Halim et al., 2017). A person who is ambiguous subtle stereotyping will assume that someone will act like their gender stereotype and with that knowledge, they will treat the person in a specific way. Ambivalent subtle stereotyping is conveyed when a group of people is seen positively but disrespected or seen negatively but respected (Fiske & Taylor, 2021). In the case of gender bias, women tend to be seen as a positive example throughout this research; it is shown that they are also seen in many negative ways.

As for a person's development, children start speaking their first words around one year old. Once their vocabulary and understanding of the social world expand, they develop a realization of what gender is. From ages two and a half to six, children are excited to be involved in stereotypical gender-related activities such as wearing clothes or playing with toys that are focused on one's gender (Halim, 2016). Even at four years old, children have reported positive attitudes toward their gender and negative attitudes toward their opposite gender (Halim et al., 2017). After six, gender-type play declines but the person's language keeps evolving, which leads to gender bias.

Even though the enthusiasm for gender-stereotypical activities tends to wear off, gender typing is all around one's social world (Halim, 2016). These gender bias attitudes

lead to more significant consequences throughout adult life. As people grow, gender segregation becomes more common throughout their lives, such as segregation in the workplace and among friendships (Halim et al., 2017). In even larger aspects, this leads to men in most societies who tend to control government, power business, health, and even money. For example, in the United States, women earn 82% of what men do (Fiske & Taylor, 2021). This creation of gender bias is so ingrained in most human languages that even in the central Dagestan highland language Lak, young girls were considered animate beings and not classified within a female category unless they grew into adult women (Gygax et al., 2019).

Gender bias can especially be found not only within learning a language but learning the stories of that language. The concept of the “Cinderella complex” is the notion that narratives are structured to enhance the stereotypical incompetence of women (Xu et al., 2019). The limiting and stereotypical feminine characters in writing provide a small number of role models who glorify the stereotypical weaknesses of their gender (Harris et al., 2017). Even within literature and movie synopses, there are frequently noticeable gender inequalities in workers’ salaries, voting rights, and educational opportunities (Xu et al., 2019).

### **Stages of Cognitive Development**

Language and cognition have fascinated people since ancient times and also has led to empirical research for almost two hundred years (de Varda & Strapparava, 2022). One of the most groundbreaking researchers in cognition was Jean Piaget, who had one of the most significant and classical theories of cognitive development (Bornstein & Lamb, 2011). His approach consisted of the idea that there were developmental schemes

in which the average person goes through four major stages that eventually lead to a fully cognitively developed person. The four developmental stages are the sensorimotor, preoperational, concrete-operational, and formal-operations periods (Bornstein & Lamb, 2011). Each stage of cognitive development is in a steady arrangement, is not flexible, and builds upon the one before it. These stages lead to an understanding of the world around the person and in turn an account of gender.

### *Sensorimotor Stage*

Beginning with the sensorimotor stage, this stage of development exists between birth and two years (Bornstein & Lamb, 2011). Within this stage of development, an infant learns what is around them, one way by interacting with items using palpable observation and perceiving the object via visual perception. Infancy is a complex time in a person's new life because there is so much knowledge to absorb. Within the sensorimotor stage, an infant experiences six substages which begin with simple reflexes and end with not only recalling past events by learning and exploring the world around them through trial and error (Bornstein & Lamb, 2011). Though this stage does not consist of symbolic thought, it sets the pathway to the preparation of language development (Zhong et al., 2014).

### *Preoperational Stage*

According to Piaget, when a child is between the ages of two and seven years old are in the preoperational stage of cognitive development (Bornstein & Lamb, 2014). The preoperational stage consists of understanding the symbolic and linguistic representation of the world around the child (Zhong et al., 2014). Around two years old, a child's mental

state language begins to develop (Longobardi et al., 2019). The mental state language is when a young child begins to cognitively process terms associated with physiological states, desires, and emotions. During this time, a child will start to spontaneously communicate these expressions. At approximately three years of age, the child will then commence communicating these terms in a way by saying that they 'think' and 'know' them.

Also, within this time of a child's life, the theory of mind is understood to be developed, and it has been discovered to be directly interconnected to mental state language (Longobardi et al., 2019). The theory of the mind is the ability to understand the presence of one's own as well as other people's mental states. The research of Longobardi et al. (2019), has demonstrated that there is a positive association between the application of personal pronouns, verb conjugation as well as the mental state language. These findings were measured by the degree to which a child was socializing with caretakers and helped facilitate as well as validate the challenges they have in acquiring person-marking devices such as understanding pronouns are associated with how a child socializes.

During the preoperational stage, children also embark upon the ideas of gender through practicing and through the caregiver's reinforcement of gender roles (Golden & Jacoby, 2018). A child shows these understandings of their world's representations through concepts of pretend play. Pretend play is when children use their symbolic thought to imagine they are something that they are not, such as a specific profession, a person they know, an animal, etc. (Bornstein & Lamb, 2011). Children slowly learn what gender is through pretend play.

During pretend play, if a child is playing in a way that is not typical of their gender, a parent can reinforce what is considered “wrong or right” using verbal remarks as well as social cues such as if a boy wants to pretend to be a princess or a girl wants to pretend to be a fireman. Other ways a child understands gender is by the amount of and types of media a child should be shown during this stage of development (Golden & Jacoby, 2018). Research has shown the more Disney princess-related media they watch, the more likely girls will only stick to stereotypical gender roles during pretend play at this time. Within this analysis, Golden and Jacob (2018) also concluded that the princesses in the movies spoke significantly less than the male characters. They concluded that this could lead girls to watch it believing that the boys around them should dominate the conversation. They also recommend that parents and teachers should be mindful of what they are not only saying but also what type of media children are listening to as well as watching during this early time in their lives (Golden & Jacoby, 2018).

### ***Concrete Operational Stage and Beyond***

Between the ages of seven and eleven, a child is in the concrete operational stage which is where they have more flexible reasoning as well as logic that is closer to an adult’s cognitive processes (Bornstein & Lamb, 2011). By this stage, their pretend play has decreased, and the child begins to understand their gender is irreversible (Golden & Jacoby, 2018). After the age of eleven, Piaget believed that some people reach a formal-operation period in which they can think abstractly and use hypothetical reasoning as well as propositional thought (Bornstein & Lamb, 2011).

Though Piaget's stages are quite significant within cognitive developmental research, today psychological researchers realize that these stages are not perfect. Current research has shown that Piaget's stages are not as fixed as he made them seem. Research has shown that children can be more flexible in their cognitive development. It has also been found that their social environment can play a significant role in their development (Bornstein & Lamb, 2011).

### **Social Cognition**

Social cognition is a crucial part of how language creates gender bias. Social cognition is a field that focuses on the mental operations behind social interactions which include how we see ourselves and other people, how we understand the behaviors and intentions of others, as well as the knowledge of social and interpersonal norms (Setién-Suero et al., 2022). Social cognitive theory suggests that repeatedly observing social behaviors can have major influences on a person's understanding of the social world (Aley & Hahn, 2020). In the context of this research, when a child is read to, the interaction between themselves and caretaker helps build their social cognitive skills by not only understanding the language and the context of the story. Within the research on social cognition, there are four key features: mentalism, process, cross-fertilization, and real-world issues (Taylor & Fiske, 2021). Each of these of the four key features can be applied to gender bias through language.

Starting with mentalism is the belief in the importance of cognitive representations which represent one's general knowledge about a concept (Taylor & Fiske, 2021). Mentalism is applied to gender bias through language because it helps reinforce mental representations of outgroups. People learn general knowledge about



language from those around them and with that, they learn stereotypical information which leads to gender bias. As suggested by the mental model's theory of language comprehension, a person will integrate explicitly provided grammatical gender information and their worldview toward gender biases during gender representation (Sato et al., 2016).

The processing assumption of social cognition in research is how cognitive elements form, operate, and evolve (Taylor & Fiske, 2021). By this assumption, during language development, a child learns language which is already incorporated with different forms of gender bias based on the language they speak. Throughout the person's life, their knowledge of what is considered appropriate to say based on their social world evolves. For example, in 2012, Sweden created a gender-neutral pronoun *hen* in the Swedish dictionary (Waller & Eriksson, 2022). At first, people were resistant to this new pronoun but eventually, their social world was more accepting of this change and with that acceptance, the people who were surveyed slowly changed their minds about it (Gustafsson Senden et al., 2015).

The third theme within social cognition research is cross-fertilization, which is the combination of social and cognitive psychology to address social cognitive research (Fiske & Taylor, 2021). The importance of this approach within gender bias language is that research is not only focusing on the social aspect of language but also on how it is formed within one's mind. For example, researchers must consider that infants are already predisposed to learning what words are due to the development of the brain as well as learning a specific language from their social world (Bzdok et al., 2016). In turn, the language the infant learns is riddled with gender bias.

The last approach of social cognition research is how it applies to real-world social issues (Fiske & Taylor, 2021). Gender bias is an important real-world social issue because it is prevalent in every human culture and found in every language in some way. Within language, gender bias is prevalent in the superiority of men as well as the inferiority of women in several ways (Bailey et al., 2020).

Realizing the issue of gender bias, some languages are evolving due to success through activism (Kersten-Pejanić, 2019). An example of this evolution is within the language of Croatian, the derivational structures are changing. As *ravanateljica* which is the feminine form of director or professor has become more commonly spoken throughout the language (Kersten-Pejanić, 2019). Society is realizing that these changes are necessary but realizing how gender develops within cognition is an important way to realize how it starts.

### **Culture and Socialization**

As a child learn a language that is based on the culture around them. One way or another, human beings all around the world have some type of culture. The conception of culture is that it is a form of behavior that is passed down from one generation to the following generation via socialization (Bornstein & Lamb, 2011). Over a hundred years ago, most societies relied on forms of labor that were divided by gender (Beblo et al., 2020). Research has revealed that changes in labor division have promoted cultural changes that have impacted the relative treatment of men versus women (Prewitt-Freilino et al., 2012). As time passed, the language of the gender divisions helped shape the language that exists today (Beblo et al., 2020).

Research has revealed that both linguistic communication and social changes in the child's world may mutually support the development of gender associations during childhood (Prystawski et al., 2022). In realizing that the social world changes throughout time, gender associations have impacted the use of natural language between children and their caretakers. It is also important to note that the amount of gender expressed within the language itself can increase the child's level of gender association (Stahlberg et al., 2007). Research has shown that mothers use supportive language with their daughters, while fathers use direct language (Prystawski et al., 2022). This can teach the child not only how to associate with others of a specific gender but how they should speak as well.

Another way socialization helps influence gender concepts within language is through modeling. The term modeling is the process of reenacting the actions of those a child admires and taking up their attitudes, expressions, and gestures (Golden & Jacoby, 2018). When a young child hears another person, whether in real life or media, talk about a specific gender in a certain way, the child tends to reenact that person and in turn, internalize the message. Once a child can differentiate genders, they are more inclined to model the characters or people within their social world that are the same sex as themselves (Golden & Jacoby, 2018).

### **Development of Word Comprehension**

Children develop word comprehension through various milestones. By one year, a toddler can understand around 78 words and by a year and a half understand up to 263 on average (Stokes et al., 2019). Six linguistic processing themes come from certain brain areas to develop word comprehension. The audition in the auditory cortex, the articulation in the inferior frontal gyrus and the motor cortex, the words dimension inside

the Wernicke area, grammar in the inferior frontal gyrus, the communication in the dorsolateral prefrontal cortex, and the literacy in the dorsal cortex (Bornstein & Lamb, 2011). These sections of the brain carry the starting point to obtaining the capability to cognitively process what gender is during early word learning.

### ***Language Development***

As the brain develops, so does a person's language. The specific language the infant prefers is the first part of helping guide their tendencies toward gender bias. The first instances of gender typing appear from infancy to early childhood (Halim, 2016). Though unable to speak, infants as young as three months have been shown to link the main capabilities of cognition with language as early as three to four months (Perszyk & Waxman, 2019).

The research was used to discover this by first having 31 three to four-month-old infants who were native to the English language, visual and auditory stimuli in both English and a similar rhythm as the German language (Perszyk & Waxman, 2019). The results concluded that the infants were given objects they could successfully identify in both languages. In the next step, the English infants were given Cantonese; a language that is rhythmically different and has many other distinctive features; the infants were given the same task of identifying objects. In this following experiment, the English infants could not identify the objects given in Cantonese which shows that as early as three months, speech processing plays an important part in the link between language and cognition. This research shows that the preference for language within infant development starts within months of being born (Perszyk & Waxman, 2019).

### ***Auditory Development***

Auditory development is a fundamental but also complex step that leads to language development because an infant has to have auditory processing abilities as well as the ability (Bornstein & Lamb, 2011). These auditory abilities have been shown to process both human and primate languages by three months and by six months, infants lose the ability for nonhuman languages (Perszyk & Waxman, 2019). By this time, infants show inclinations for the language that bears a resemblance to their mothers' speech as well as their mother's voices, as opposed to other women around them (Bornstein & Lamb, 2011). Within the development process, it has been shown that auditory feedback can help increase an infant's understanding of language (Samuel et al., 2019). Since the infant's environment is primarily the home, the more stimulating the environment is, the more likely they are to develop (Cao et al., 2021).

To become proficient in the capacity to learn words, an infant must understand specific words from the speech around them. They should also have the ability to comprehend that there is categorization within language (Frost et al., 2019). Before speaking words, an infant must understand that there are a variety of words that have meanings. Once an infant is born, they are susceptible to understanding syntax as well as language structure; once they grasp this knowledge, they begin to have the ability to tell the difference between words.

As early as six weeks, an infant can start discriminating sentences in languages that are different from their native language based on the structure of phrases (de la Cruz-Pavia et al., 2020). A major help for infants to understand speech so early is through infant direct speech. This form of speech is when a person changes the tone of their

voice, higher pitch, and longer pauses between words (Outters et al., 2020). These forms of speech can hold the basis of hearing and associating words with gender.

### *Categorization*

Early on, infants are proficient at object categorization which gives them the capacity to categorize what is in their environment (Frost et al., 2019). They must not only understand the concept of categorization but also where each noun is placed within its category (Smolik & Blahova, 2019). Infants must also understand what function words are, which are words that indicate grammatical structure. Another concept infants must understand is what content words are, which are words that hold lexical meaning such as everyday objects in their environment (de la Cruz-Pavia et al., 2020).

Understanding that gender is a category that is present in many languages throughout the world, children must develop the gender categorization of nouns when they are learning a language (Smolik & Blahova, 2019). The challenge of this is that there is no obvious way to predict gender via phonological and/or semantic properties since gender is a social construct and varies between languages. They must also understand the features of nouns that are gendered within their language.

Gender categorization becomes most accomplished when a child reaches the age of three and begins combining words. Understanding various concepts leads to infants honing the skill of distinguishing objects as individuals and then that objects have a relational group with one another (de la Cruz-Pavia et al., 2020). This distinction only appears when infants can understand that differentiating common objects begin to associate these objects with a various list of items they already know of (Hoff & Shatz,

2007). For example, if they know that pink, dolls, and dresses are categorized as feminine, and they learn that flowers are also feminine, they will put them in that same category along with the rest of what they already know.

At around seven or eight months, an infant already has a basic but conceptual understanding of word order, precisely of how the relative order of content words and functional words within their language (de la Cruz-Pavia et al., 2021). When learning word order via syntax, the infant is also learning how social hierarchies exist within their culture (Gygax et al., 2019). For example, regarding gender, typically in English people would use the terms *boys and girls* instead of *girls and boys*, mentioning boys first shows the hierarchy and bias infants learn.

Within the first year of an infant's life, they uncover patterns and structures that control the language their caretakers speak which leads them to language development (Thiessen et al., 2005). Infants as young as three months have shown signs of object categorization when given auditory information that pairs with an image (Perszyk & Waxman, 2019). After the first twelve months, their simple level categorization progresses (Hoff & Shatz, 2007). Between eight and seventeen months, an infant is aware of all characteristics that are commonly distinguished between content and function words (de la Cruz-Pavia et al., 2021). The main reason for this progression is that their caretakers give them the names of more objects within their surroundings (Hoff & Shatz, 2007).

Though these levels of categorization may seem simplistic, they help build upon the understanding of the category of gender (Prystawski et al., 2022). When the child hears those around them speak a language commonly mentioning gender, it eventually

becomes normal for the child (Beblo et al., 2020). Hearing these gender words so often eventually leads the child to understand that these words help divide their world.

### **Development of Speech**

Once an infant hones the ability to understand words, speaking helps expand upon the cognitive processes of understanding the concept of gender. The first 24 months of life consist of the challenging steps towards early learning and speaking of words (Hoff & Shatz, 2007). Right after birth, there is the continual growth of an infant's articulatory development. At the beginning of life, infancy generates four distinguishing styles of crying: birth cry, pain cry, hunger cry, and pleasure cry (Bornstein & Lamb, 2011). After the birth of the infant, it grows its development of speech and with the grace of God is upon them in their journey of life (Luke 2:40, *King James Bible*, 1769/2017).

As the infant's growth continues, by the first three months their vocalization necessitates crying as well as vegetative adaptations, such as chewing and coughing (Bornstein & Lamb, 2011). After three months old, they begin to "coo" which comprises a sound that does not have a verbal structure. Also, the infant has well-integrated inflections that sound agreeable to the parents and those who care for them, indicating that they are identifying with their native language. Research has revealed that at this time, they learn to recognize their native language from those around them, it is the first link between words and thoughts (Perszyk & Waxman, 2019).

Also, after three months, infants increasingly produce vowel-like sounds that derive from pleasure. After these sounds, verbal labels help to facilitate the communication process of shaping words into notions, such as gender (Lupyan et al.,



2007). These infants are learning that these words have concepts behind them. In terms of gender, if they are constantly being reinforced with specific words that are associated with a specific gender then they will grow to internalize it. For example, if boys are more likely to hear words about sports and cars and girls are more likely to hear words referencing flowers and dolls, then the words they learn will help build their concept of what gender is (Prystawski et al., 2022).

Language development consists of elaborate components of understanding the language itself as well as a part of an infant's auditory and articulatory development. For infants, early word learning primarily consists of nouns. By the time they turn one year old, they can say on average six words, and by the time they are eighteen months old, they can say about 57 (Stokes et al., 2019). The more an infant learns, the more non-noun words appear within their vocabulary.

To understand what level of vocabulary an infant is at, the most resourceful approach is object representation which is to see if they know what common objects are called around their environment (Gershkoff-Stowe, 2002). Another concept to understand vocabulary level is object segregation, this concept helps an infant understand that each object is different from one other which helps object representation exist. Also, another concept known as object individuation helps infants understand that there are various objects in a given surrounding area. Once infants fully understand these concepts, object permanence sets in. Object permanence is the understanding that an object still exists even though it is not visible to the infant (Hoff & Shatz, 2007).

As the early stage of word development progresses, adjectives and verbs start to appear. This appearance suggests that they can draw meaning onto various forms of

words, even ones that reflect gender (Smolik & Blahova, 2018). When learning verbs and adjectives in the context of gender, children use more active verbs to describe men, and women are typically described by adjectives (Gygax et al., 2019).

As their lexicon speedily expands, so does the volume of inaccuracies within their speech expands also. Even though infants tend to have many inaccuracies, the number of inaccuracies tends to lessen as they practice speaking more often and the more their caretakers correct the wrong words they are saying (Gershkoff-Stowe, 2002). Correcting an infant's inaccuracies during early word learning can also help reinforce the concept of gender (Prystawski et al., 2022).

### **Intrinsic Features of Language and Gender**

Language plays a part in biased gender representation within its intrinsic characteristics and is one of the ways how people learn to distinguish women and men (Gygax et al., 2019). Pronouns, androcentrism, and the masculine-male generic are the tendencies within everyday speech that illustrate biases throughout most forms of languages. These distinct ways of dialogue are different than merely affirming male superiority and lack of fondness for women (Bailey et al., 2020). Sexism or the bias toward sex or gender has been recorded throughout human history and seen all over the world and language helps reaffirm this form of thinking (Wasserman & Weseley, 2009). These different forms of gendered language are thought to cause different ways of thinking among the speakers. Research has also shown that grammatically gendered languages have higher ratings of sexism world expands gendered languages (Harris et al., 2017). Languages with grammatical not only gender boost sexist attitudes but also have a distinct impact on females because it suggests that both genders represent two distinct

classes in society, which leads to the suggestion that women are inferior to men. (Wasserman & Weseley, 2009).

### *Pronouns*

Pronouns are a distinct form of grammar within human language. This form of grammar helps identify the speaker or to whom they are speaking instead of the noun itself (Longobardi et al., 2019). These words help bring together one utterance to another utterance when understanding a chronological sequence (Hilmisdottir, 2020). Pronouns exist within a language in a way that provides syntax, so the message of a person is clear as to whom they are talking about.

Though there are exceptions such as genderless languages, most languages' referential gender is used to identify referents as women and men and then use the subsequent grammatical form (Hilmisdottir, 2020). The existence of pronouns helps reinforce the gender binary in society because it helps reiterate the idea that people need to be identified as male or female. Within this binary, there is also the sometimes-used exception of a neutral pronoun which varies by language.

Pronouns begin to appear in a child's vocabulary around 18 to 20 months old (Longobardi et al., 2019). Communicating pronouns can be difficult for a child at first because they must understand that the same form of pronoun could be referring to a different person. Another challenge is that the child must not only understand and produce them, but they must have some knowledge of the idea that different people can assume various roles in a given situation.

Early word learners can be challenged by learning pronouns. In the English language, children must learn that the third-person singular (such as 'She drinks the water.') form changes the way a verb is said compared to other forms of pronouns (such

as ‘I/you/they drink the water.’). In contrast, Spanish-speaking children must learn that the change in the person they are referring to impacts the verb’s structure. The verbs also become coupled via not only the person but also the amount, tense, mood, aspect, and gender (Longobardi et al., 2019). For example, the verb ‘drink’ itself changes based on the pronouns, ‘I drink.’ is ‘Bebo’, ‘You drink’ is ‘Bebes’, and ‘They drink.’ Is ‘Ellos/Ellas beben.’ and ‘He/She drinks’ is ‘El/Ella bebe.’. Whether her English, Spanish, or another language, understanding pronouns is a complex but necessary part of syntax to learn in one’s native tongue.

### ***Androcentrism***

Androcentrism is the tendency to describe men as people while stating women as their specific gender (Prewitt-Freilino et al., 2011). Men have the propensity to be perceived as the common neutral within language. This ideology directs women to be considered as othered and only noted when someone is referring to that specific gender of women. Perceiving men to be the exemplars of human beings is known to be connected to cognitive bias within people (Bailey et al., 2022)

Research has shown that men are more likely to display gender-specific biases than women (Bailey et al., 2022). Within this research, men are more likely than women to use a man as an example of a person because women will realize at times that the example of a woman could be better suited in certain situations than a man did. Also, men were more likely to self-report that they have common traits related to androcentrism than women. This shows that women are less likely to use androcentric terminology than men.

### ***Masculine-Male Generics***

Masculine-male generic is a common attribute where word forms are used to refer to male referents as well as to refer to any group of people regardless of gender, as male in many cultures (Gygax et al., 2019). The specific languages vary in using the masculine-male generic but also do the time within the culture. In 19<sup>th</sup>-century English, using the term *they* as a generic was highly criticized and not commonly used. This bias existed because society at the time felt that the generic term should be *he* due to the higher status of men over women, this eventually changed by the next century.

Even though the English and Swedish languages have gender-neutral terms, not all languages have them. The Swedish language officially created the pronoun *hen* in 2012 as a way to promote gender neutrality within their society (Wallner & Eriksson, 2022). Starting in the 17<sup>th</sup> century, the French language as well as the early 20<sup>th</sup>-century German language still have the ideology of using the masculine generic. These bias generics facilitate the learning of gender in a child and also vary by the degree to which the language is gendered.

At its core, the reasoning of why understanding gender through cognitive processes within early word learning began within the Bible. The Bible does not remain neutral in many aspects and has been translated many times since it was first written in what is now considered a dead language (Mojola, 2018). Even though there are many instances within the Bible where God is described using feminine metaphors and is considered a gender-neutral being, most Biblical translations refer to God as masculine-male generic.

It is common to speak of God in the masculine-male form, even when God's form tends to be considered a neutral being, providing a long-used example of creating the masculine-male generic. There are only rare exceptions of the Christian Bible considering

God in the feminine-female generic and that would be the Iraqi language which calls God in the book of Genesis, not as the Lord or He but Mother Looa or She (Mojola, 2018).

This gender change was primarily due to long-standing Iraqi tradition and the fact that most of the translators at the time were women.

### **Degrees of Gendered Languages**

Each language varies in terms of how the gender within the language is distributed (Beatty-Martinez & Dussias, 2019). A child's native language can hold the basis of how their actions, thoughts, and perception of concepts such as gender throughout their life is known as the Sapir-Whorf hypothesis (DeFranza et al., 2020). This hypothesis consists of the idea that one's first language affects their perception of how one understands their environment. Since people speak a variety of different first languages, each language is the basis of how they think. In turn, when the gender categories are referenced in some way in the child's mind, they have increased awareness of the gender (Belbo et al., 2020). This increased awareness is represented within the degrees of gendered language.

### ***Gendered Languages***

When children are learning gendered languages, they tend to cognitively understand gender differently than genderless. The degrees of language in the aspect of gendered language consist of grammatically gendered language, naturally gendered language, a combination of both grammatically gendered and naturally gendered, and genderless language (Gygax et al., 2019). Gendered languages consist of pronouns, nouns, or verbs that are present in the form of male and/or female versions of the word

(DeFranza et al., 2020). When referencing gendered pronouns, certain languages have specific gender-specific pronouns in the first and second forms (Beblo et al., 2022).

The main criterion for gendered language is that all the nouns are categorized into different classes, that there are grammatical agreements between nouns and the words or elements dependent on them, as well as a class association of nouns that show a substantial semantic relationship with sex (Gygax et al., 2019). These languages differ as to how gender is assigned in terms of morphological composition or phonological shape (Beatty-Martinez & Dussias, 2019). These gender assignments are easily prevalent which makes realizing the gender of the word obvious to the child learning it (Belbo et al., 2020).

### **Grammatical Gendered Language.**

Within grammatical gendered language, objects are semantically and randomly tied to gender which varies by language (Gygax et al., 2019). For example, the word bed is considered feminine in Spanish but masculine in Italian (Samuel et al., 2019). Even with examples such as those, lately, researchers think that these words are either feminine or masculine due to gender norms of what each word was associated with in terms of labor division over a hundred years ago (Beblo et al., 2020). Researchers believe this because nouns related to stereotypical feminine tasks tend to be feminine words such as kitchen and house in Spanish. Also in Spanish, stereotypically masculine labor division-related objects like cars and boats are masculine words.

Within these languages, children must learn to use the article's gender to accelerate the cognitive processing of the noun which is upcoming (Smolik & Blahova,

2019). When children of grammatically gendered languages learn these words, they start to understand that there are two different genders. The children start to understand that the objects within the social construct are either feminine or masculine, even though they do not have a gender.

Research has shown that countries that speak grammatical gendered languages have less gender equality in terms of finances, religion, traditions, government, and other positions of power than genderless languages (Prewitt-Freilino et al., 2012). As children use these words and see their social world as such, the concept of gender becomes even more reinforced. Examples of some grammatical gendered languages are Czech, German, and Spanish (Gygax et al., 2019). Though they are grammatically gendered languages, unlike Spanish, Czech does not require nouns to be preceded by a gender-marking element. (Smolik & Blahova, 2019).

Children whose first language is Spanish tend to gain a bias toward masculine usages due to the asymmetry of grammar (Beatty-Martinez & Dussias, 2019). This gender bias found within this language exists because the default term for any noun or pronoun is masculine. In Spanish, even if there is a group of females and one male the term will still be considered masculine. Native Spanish speakers even tend to use the incorrect masculine forms of words when they are supposed to use the feminine form of the word (Beatty-Martinez & Dussias, 2019).

Research has shown that certain gendered languages such as French produce a stimulus to express a more sexist attitude than a person who reads naturally gendered language such as English (Wasserman & Weseley, 2009). One reason for this is that a person who reads French's grammatical structure forces people to distinguish between



masculine and feminine grammatically gendered nouns. English, on the other hand, does not make the distinction therefore, there is no stimulus. In this case, men are more likely to show sexist attitudes than women.

The Icelandic language is also a grammatical gender language. In this language, nouns affect the descent of adjectives, pronouns, past participles, low cardinals as well as ordinals (Hilmisdottir, 2020). In Icelandic, a noun is assigned to a gender depending on the word structure of the word, instead of semantics. This indoctrination of linguistic and cultural bias toward masculinity overall is not only grammatically in grammatically gendered languages but naturally gendered ones as well.

### **Natural Gendered Languages.**

On the other hand, naturally gendered languages do not commemorate their grammar by gender and the majority of nouns are dependent forms that are considered neutral (Stahlberg et al., 2007). Instead of identifying words with a certain gender, naturally gendered languages use pronouns to clarify if a human or creature is of a certain gender (Gygax et al., 2019). There are also a small number of exceptions that are important to note, in some cases personal nouns can indicate women and men in situations such as actor/actress (Belbo et al., 2020).

An example of a naturally gendered language is English (Gygax et al., 2019). In English, the inclusion of gender categorization in its primary form is expected and normative (Hilmisdottir, 2020). The gendered pronouns within the English language make the categorization of gender a structure of the grammar of that language and there is considered system relevant. Within naturally gendered languages, the child needs to

understand the importance of the use of pronouns as well as specific words to help cognitively reinforce gender.

Various countries' naturally gendered languages are working toward using gender-neutral terminology. These types of languages tend to be more successful at promoting gender inclusion because they can lead to the creation of a gender-neutral option for children to learn (Prewitt-Freilino et al., 2012). Research has found that when children are hearing this new term, they are less likely to think in terms of gender roles and think of the sentence it is used in as gender-neutral (Wallner & Eriksson, 2022).

The Swedish people are trying to break down barriers of putting people in gender roles by teaching this concept at an early age (Wallner & Eriksson, 2022). As for English, studies have shown that gender-symmetrical terms (i.e., he/she) lead to children visualizing both male and female characters in stories over only the term *they* (Filipović, 2018). These are important findings because authors typically refer to unknown storybook characters as male (Bailey et al., 2022). Even though there are many gendered languages, there are also languages that are considered genderless.

### ***Genderless Languages***

As for genderless languages, nouns, and pronouns that refer to people are typically not determined by gender (Gygax et al., 2019). Some examples of genderless languages are Chinese and Finnish (Beblo et al., 2020). Though in these languages the gender of the person being referred to is ambiguous, there are still ways gender is expressed which leads to a child learning what the concept is (Stahlberg et al., 2007). Within genderless languages, vocabulary terms such as man, girl, boy, woman, etc.

determine whom a person is referring to within their train of thought instead of using pronouns.

For instance, children who live in the Southern Highlands of Tanzania speak Kihehe, a genderless language, which does not have any pronouns for he or her (Mojola, 2018). In this case, every object falls into a different class that is either nominal or semantic. For example, God in this language is considered a genderless human being called Nguluve. There are also some languages where there is a mix of both gendered and genderless languages because all types of languages have some degree of expressing the concept of gender (Gygax et al., 2019).

### *Combinations*

There are a few languages that have a variation between the gendered and genderless. The Dutch and Norwegian languages are a combination of grammatical gender and natural gender language categories (Gygax et al., 2019). They are considered a combination because they have some grammatical gender in terms of a few genders for inanimate objects and gender for pronouns. Another combination is genderless languages with some hints of grammatical gender; in these instances, most personal nouns and personal pronouns are represented by gender but do not have a distinctive linguistic form. Examples of this combination are the languages of Basque and Oriya (Gygax et al., 2019). These combinations may not be too common, but help show that languages are truly diverse.

### **Bilingual First Languages**

When a child is raised in a household that speaks two first languages, they tend to develop both those languages at the same time. Research has shown that listening to two languages can help support an infant's overall cognitive growth (Perszyk & Waxman, 2019). The achievement of bilingual first languages progresses in three stages. In the beginning, the child has a single lexical system that consists of words from both languages, this is comparable to the language development of a monolingual child (Hoff & Shatz, 2007). Next, the child operates the conventions of syntax to both languages they are learning but can differentiate between both of the vocabularies. Lastly, the child can speak both languages as well as tell apart the difference between the languages' syntax and lexicons (Hoff & Shatz, 2007).

Also, research has shown that bilingual children may have separate phonological systems that are not autonomous (Paradis, 2001). Research has found that these children have two separate understandings of their vocabulary. Bilingual first languages have been known to play a part in the cognitive process of early word learning and understanding gender (Beatty-Martinez & Dussias, 2019).

A common concept within bilingualism is known as codeswitching; this is the change between both languages the child is speaking within and between utterances of bilingual discourse (Hoff & Shatz, 2007). In the case when only one of the bilingual languages is grammatical gender language and the other is not, research has shown that the speaker tends to codeswitch to the default gendered noun (Vanden Wyngaerd, 2021). Other examples of this type of research have shown that those who speak both Spanish and English have a higher tendency to mix their noun phrase using the English noun with Spanish determiners (Beatty-Martinez & Dussias, 2019). This form of codeswitching

leads to a bias toward masculine forms of words due to Spanish having asymmetry when gender assigning their lexicon.

### **Children's Literature**

Children's literature plays a significant role in their development. Research has found that children's literature provides them with an opportunity to understand their culture, and language, as well as to help them experience points-of-view of other people (Tsao, 2020). It has also been found that it promotes a child's imagination, creativity, social-emotional development as well as cognitive skills (Kim & Hachey, 2021). Since it plays such a significant role in a child's life, it helps not only facilitate but reinforce gender bias language.

### **Reinforcing Gender Bias Language**

Gender bias language is reinforced throughout a person's development. Once a young child understands what gender is, it shows that their cognitive abilities are enhanced because they understand categories (Halim, 2016). These social categories, especially within the concepts relating to gender, become reinforced as their social circle tells them that what they are saying is correct or incorrect.

There is much criticism toward reinforcing the feminist form of words due to binaries and consequentially heteronormative ideology (Kersten-Pejanić, 2019). Within specific languages, there has been a backlash against reducing gender bias within their grammar. In English, there has been the use of *they* as a neutral pronoun to minimize gender bias, but no completely new word has been used outside of LGBTQ+ communities most likely due to political reasons (Gustafsson, et al., 2015). Serbia language advocates and linguistics resist having a feminine-derived word for professions (Kersten-Pejanić, 2019). Even within Sweden, it took a lot of effort from LGBTQ+

activities, scholars, and politicians, and fifty years to finally have a neutral pronoun in its' dictionaries and written throughout its official government forms (Gustafsson, et al., 2015).

Within the development, if the child is saying what is an incorrect gender-type word, their caretaker will typically correct them. This form of reinforcement helps not only reinforce most people's gender identity but can reinforce a child's negative attitude towards the other gender which can lead to intergroup behavioral issues (Halim et al., 2017). As children grow into adults and apply to jobs, women tend to avoid applying to jobs where it has a strong male association, use masculine pronouns, or use the masculine form of the occupational name (Lipovsky, 2014).

### ***Gender Bias Reinforcement Through Media***

Gender bias language is also reinforced throughout various types of media platforms. This reinforcement helps solidify the masculine generic language that favors men, which in turn increases the likelihood of people of all ages to imagine men in their minds over women in comparison to a more inclusive language (Bailey et al., 2022).

Another reason that gender bias is reinforced is that only equal-status intergroup contact typically reduces prejudice, and in this case, the groups are in constant contact with each other, so this reduction is difficult to achieve (Fiske & Taylor, 2021).

Gender bias language is also reinforced within the stories people grow up with. Children growing up are more likely to be surrounded by significantly higher amounts of male than female literary characters (Harris et al., 2017). Research on the "Cinderella complex" used sources from IMDB, IMSDB, and the Gutenberg Project, to analyze 6,087 movie synopses, 1,1109 movie scripts, and 7,226 books to help understand how narratives reinforce gender stereotypes in three diverse ways (Xu et al., 2019). The over-

concept of gender stereotypes resulted in confirming that most of the synopses, scripts, and books followed the Cinderella complex and the assumption that women must depend on men in their quest for a happy and satisfied life. This type of misrepresentation and misleading examples of life for young girls run the risk of them not achieving their true potential in the world because they are only shown to believe that happiness is finding a husband in their life and nothing more (Tsao, 2020).

Other results found within Xu et al., (2019) research was that gender roles tend to emerge when interacting with a character of the opposite gender. Women are happier when they meet men in the stories than men meet women. Men were also more likely to be described in more detail than women, which shows that there was more detail and effort in writing the men (Xu et al., 2019). Men are also typically described more via verbs that signify agency and action whereas women are frequently depicted passively by being associated with nouns and adjectives (Gygax et al., 2019).

Even within taglines of movies, advertisers reinforce gender bias language. For example, in the children's movie *Shrek*, the tagline is "The greatest fairytale never told" and the tagline for *Tangled* is "They're taking adventures to new lengths" (Aley & Hahn, 2020). *Shrek* has a male main character, and the tagline gives a memorable, genderless statement. *Tangled's* tagline is trying to promote that even though it is a movie has a main female character, it uses the word *they're* to try to show that this movie is not just for girls, but it can be an adventurous movie for boys as well (Aley & Hahn, 2020). This shows that the creator of the *Tangled* tagline assumes that they would get more people to watch their movie if they promoted it for both genders while the creators of *Shrek* would assume everyone would watch it without thinking of the gender of the main character. This research shows that there is a reinforcement of gender bias within children's stories.

### **Biblical Foundations of the Study**

Within Galatians 3:28, “There is neither Jew nor Greek, there is neither bond nor free, there is neither male nor female: for ye are all one in Christ Jesus.” shows that the Lord wanted equality among the genders. Even the Lord expresses that there is an importance in word comprehension, especially a basic understanding of concepts in Psalms 119:130, “The entrance of thy words giveth light; it giveth understanding unto the simple” (*King James Bible*, 1769/2017). He gave us all of the tools we need to develop an understanding of language. “There are numerous human languages in the humanity and none of them without meaning” (*King James Bible*, 1769/2017, 1 Corinthians 14:10). The Lord realizes that every language may seem so different from one another but they each have meaning.

Most languages promote inequality of gender based on the words themselves, which goes against the Lord’s words. Not only languages and secular socializing, but the degree to which a caretaker brings religion into a child’s life can play a part in the child’s cognitive processes. If the Bible is an influential part of a young child’s life, the words within it can influence how they understand their native language. It can also influence how the child understands gender based on not only the words of the Bible but also the cultural influences it plays in society (Mojola, 2018). Proverbs 22:6 mentions that parents should “Train up a child in the way he should go: and when he is old, he will not depart from it.” (*King James Bible*, 1769/2017). This quote demonstrates that even in the time the Bible was written, it was understood that what the child experience prepares them for the rest of their lives. Once the preoperational stage ends, the concrete operational stage begins.



After the birth of the infant, it is grown to develop speech and the grace of God is upon them in their journey of life (*King James Bible*, 1769/2017, Luke 2:40). The words and culture of the Bible can play a considerable influence on how infants learn gender through socialization. As previously mentioned, one of the significant influences of early word learning is modeling from caretakers, especially when it involves religious texts such as the bible that have been known to help transmit not only language but culture and traditional values (Mojola, 2018). Infants in Christian homes can learn words of the Bible from their caretakers, as well as if they are brought to church.

Androcentrism is a common concept in the current world and has even been described in Biblical research. The Christian Bible is considered androcentric because of its profound foundations of linguistic point of view that favors men as representative of all human beings (Mojola, 2018). Researchers suggest reading a less androcentric translation of the bible to help break down the patriarchal ideology and influences (Nicholson & Domoney-Lyttle, 2020). Androcentrism is believed to be a byproduct of egocentrism because men tend to have greater influence in our society today, as well as in Biblical times. This influence leads to spreading the cultural and linguistical certainty that they are the center of the world and if a person is not a man, then that person is the other gender (Bailey et al., 2022).

Pronouns are an important part of language learning because when parents are teaching their young children the words of the bible, pronouns are an important aspect. Pronouns first appear at the beginning of the Book of Genesis. The first pronoun used in the *King James Bible* (1769/2017) is when God is first referred to as He for the first time in Genesis 1:5, “And God called the light Day, and the darkness he called Night. And the evening and the morning were the first days.” The first use of the feminine pronoun she,

is not mentioned until Genesis 2:22-23 when Eve was created by God from the rib of Adam in the Garden of Eden.

A prominent example of religious influence stems from the beginning of the Bible in Genesis 1:27, “So God created man in his image, in the image of God created he him; male and female created he them.” (*King James Bible*, 1769/2017). This demonstrates that at the beginning of time, a man was God’s first creation and females were second. This example in Genesis is not only the foundation of the social hierarchy, which consists of men being placed higher than women but helps reinforce the idea that gender constructs (Nicolson & Domoney-Little, 2020). Genesis 3:16 explores how women have been punished not only with childbirth pain, and a desire for their husbands but also to be ruled by their husbands (*King James Bible*, 1763/2017). This idea of a woman being ruled over a man reinforces the stereotype that a man should be put first, even within language. This shows that even within the beginning of time, God has directed us toward gender bias within language.

### **Summary**

During early childhood, people develop the concept of what gender is by developing linguistic understanding and the capability to teach in their native language. Not only does the physical capacity to comprehend language play a large factor, but so do many other social influences. Through socialization, the degree to which a caretaker’s culture and biblical perspective can help influence how a child will learn speech and with that grow to understand what gender is. There are also intrinsic features such as pronouns, androcentrism, as well as masculine-male generic which help reinforce the existence of the gender binary throughout the language.

Another major influence is the form of gender within the grammar of a child's native language. These versions of languages range from grammatical gender languages, natural gender language, and genderless language, as well as combinations between them. These influences are mostly biased toward learning the masculine-male generic, androcentrism, and pronouns. Lastly, infants who are raised to become bilingual have distinct ways of understanding the social construct of gender. The development of the social construct of gender is important to understand. This research study focused on how children's literature is one avenue in which they learn what gender is within their native language.

## CHAPTER 3: RESEARCH METHOD

### **Overview**

The purpose of this quantitative content analysis study was to show how gender biases are represented in children's literature in different languages. It compared how gender bias is shown in natural gender language and grammatical gender language within the context of children's literature. This chapter describes the method the researcher used to conduct this study. It will also outline the research questions, research design, participants, study procedures, instrumentation, measurements, data analysis, delimitations, assumptions, and limitations.

### **Research Questions**

RQ1: In what ways are gender biases found within natural gender language within children's literature?

RQ 2: In what ways are gender biases found within grammatical gender language within children's literature?

RQ 3: What are the differences, if any, in gender biases in children's literature between natural gender language and grammatical gender language?

### **Research Design**

The research design used a quasi-experimental static-group comparison design. Since the purpose of this study is to show how gender biases are represented in children's literature in different languages, it identified how gender is represented in children's literature and how different languages portray gender differently. This study compared gender bias within grammatical and natural gender languages. These language comparisons were chosen because each type of gender language has a distinct way of

representing men and women (Gygax et al., 2019). These distinctions have been found to lead to an increase in gender prejudice and gender stereotypes (DeFranza et al., 2020).

The study used children's literature in English as a basis for the use of gender bias in children's literature for natural gender language. This study used children's literature in Spanish as a basis for the use of gender bias in children's literature for grammatical gender language. It used NYPL's books for the English and Spanish selections. They were the most appropriate to use because they were selected by expert librarians and educators who, out of thousands of newly published books, decided that these are the most recommended and appropriate books for children (Sherwood, 2022; Nati Per Leggere, 2023). This method was useful because it allowed the researcher to find carefully selected sources that can be easily accessed at any time. It also allowed the researcher to go back to the source multiple times for analysis. Lastly, it can allow other researchers to duplicate this research in the future because the lists have open access and will change from year to year.

Similar research was performed by Casey et al. (2021) when they compared male and female protagonists within children's literature over the past 60 years. Instead of comparing children's literature from one year to the other, the current study compared gender bias in two languages. This was an appropriate choice for the present study because comparing two languages of current literature can help address how today's culture emphasizes gender. This study helps researchers understand that most gender bias and sexism in children's literature can affect gender identity development in young children (Tsao, 2020).

The researcher also determined the gender of the main character. To determine who is the main character, the researcher saw which characters, if any, are mentioned in

the title. If they were not mentioned in the title by name, then the researcher saw if the name was mentioned in the brief description. Similar to how Casey et al. (2021) studied gender bias, the researcher determined how many male and female characters are in a story, but unlike them, this researcher also determined how many gender-neutral characters. This researcher added the notion of determining gender-neutral characters because children can be too influenced by gender categories, and gender-neutral characters allow them to override gender bias in development (Gustafsson et al., 2015). Lastly, the researcher also considered that there might be more than one main character of different genders.

The researcher then analyzed how characters reinforce gender stereotypes. This was done by determining which words describe the male and female characters. According to Xu et al. (2019), female characters are more focused on relationships with others, such as caretakers or mothers, and are described by how they look, while male characters are more likely to be described as words relating to power and adventure.

### **Children's Literature Selections**

The researcher used children's literature in both the English and Spanish languages. To determine the most appropriate literature within the English language, the research used the New York Public Library's (NYPL) list of the top children's books for this age group which has been put together by expert librarians (Sherwood, 2023). The NYPL was chosen because it is the country's largest public library system. Research was done for both the 2022 and 2021 lists of NYPL's Best Books to increase the amount of both English and Spanish books for this research.

### **Study Procedures**

The researcher first needed to secure the Institutional Review Board (IRB) approval. The IRB approval letter is found in Appendix A. Once the researcher receives permission from the IRB, they will be able to move forward with the study. The first step is to gather the book information from each website. To analyze the English list from the NYPL's website, the researcher went to this website <https://www.nypl.org/books-more/recommendations/best-books/kids>.

The NYPL website has its lists divided into the best of adults, teens, and kids. The research selected the "Best Book for Kids 2022" and "Best Book for Kids 2021". Within this section, the researcher specified that they only wanted books in the English language and Spanish language. Some books were considered bilingual books, and these books were taken out of consideration for both the English and Spanish book lists.

Once the list of books was gathered, the researcher started their analysis. Each book title and brief description were read. As the researcher was reading, they coded and recorded each of the variables in SPSS. The researcher's code for recording the main character's gender in each book was 1 for male, 2 for female, 3 for unknown, and 4 for multiple main characters of different genders. The target audience for each book was coded 1 for infant/toddler (zero to two years old), 2 for preschool (three to five years old), 3 for early elementary (six to eight years old), 4 for middle elementary (nine to ten years old), and 5 for late elementary (eleven to twelve years old). As for enforcing gender stereotypes in each book, the researcher used a 1 for yes and a 2 for no. Then the researcher used each section of Table 1 (as seen below) and determined how many instances of each category were fulfilled. Once all of the reading and coding were

completed, the researcher compared the English and Spanish language books to see if there were any overarching differences between the two.

### **Instrumentation and Measurement**

All of these books are fiction and were analyzed using a coding procedure. As seen below in Table 1, the coding procedures for this research were coded for: the gender of the central character, the age of the target audience, and enforcing gender stereotypes. The coding itself was based on each book's title, as well as the brief description mentioned on the website.

#### **Gender of the Main Character**

Similar to Casey et al. (2021), the researcher identified each of the book's protagonists. This was determined by the name being featured in the title or the character being emphasized in the book's description. The main character was categorized as either female, male, or unknown. This information was determined by the typical gender of the character's name, the pronouns used, and the overall cultural assumption of the character based on the title and description. If there were no explicit gender clues provided, then the main character's gender would be considered unknown. Unlike Casey et al. (2021), this researcher decided to not exclude books with unknown main characters' genders because it would show that the book does not emphasize gender bias language or stereotypes. Also, if there were multiple main characters of all of the same gender, then the researcher would consider it as one gender (female, male, or unknown). If there were



multiple main characters of different genders, then they would be counted as a fourth category.

### **Age of Target Audience**

NYPL specifies that each book is for children younger than teenage years, but further research was needed for what age may be appropriate for each book. Since NYPL does not have a target audience for each age for every book, the researcher had to use the Boston Public Library for some books, as well as the book publisher's website. If this information was still not found, the researcher used GoodReads.com and if this website does not have the information, the researcher used Amazon.com as a last resort. Similarly, to Casey et al. (2021), the age of the target audience was divided into five different age groups. The age groups are infant/toddler (zero to two years old), preschool (three to five years old), early elementary (six to eight years old), middle elementary (nine to ten years old), and late elementary (eleven to twelve years old).

### **Enforcing Gender Stereotypes**

Reinforcing gender stereotypes was operationally defined in three ways: 1. The female characters are focused on relationships and their physical appearance, while male characters are focused on adventure, strength, and bravery (Xu et al., 2019). 2. The characters will have stereotypical gender roles, such as a female character being a princess, nurse, or teacher and the males being kings, doctors, or bosses. 3. It promotes gender categorization by differentiating common objects associated with gender on the cover of the book (de la Cruz-Pavia et al., 2020). Such examples of female characters would be an abundance of pink or purple objects that would not normally be these colors, the character playing with dolls, or dressed in the stereotypical gender roles mentioned above. Examples of male characters' emphasis on gender categorization on the cover

would be if they are dressed in outfits that stereotypically fit their gender roles mentioned above or performing an adventurous action. If the book enforces these stereotypes, then it will be marked as a yes, if it does not, then it will be marked as a no. If there are multiple main characters of different genders and the stereotype is reinforced, then it will be considered a yes. If the main characters have unknown genders, then this section was considered a no.

**Table 1. Number of books with each variable**

<b>Variable</b>	<i>N1 (English)</i>	<i>N2 (Spanish)</i>
<i>Main Character Gender:</i>		
Female		
Male		
Unknown		
Multiple Genders		
<i>Target Audience:</i>		
Infant/Toddler		
Preschool		
Early Elementary		
Middle Elementary		
Late Elementary		
<i>Enforcing Gender Stereotypes</i>		
Yes		
No		

Within this research, to ensure reliability, this form of coding was done twice. The researcher performed all of the coding once then went back and did it again to get a second look at each book. The first and second coding lists were then compared.

### **Comparing Gender Languages**

Once the coding was completed in Table 1, the researcher then saw if there were any differences in gender bias in children's literature between natural gender language

and grammatical gender language. It was compared with each row of Table 1 to see if there were any significant differences.

### **Data Analysis**

It was predicted that there would be more male main characters than female or unknown determine for both the Spanish and English books. This was predicted because Casey et al. (2021) found that males are overrepresented in children's literature within the past decade. To find this statistical information for English and Spanish books separately, the researcher used logistic regression since it is going to predict a dichotomous outcome from a categorical variable (Aberson, 2019, p. 147). As for enforcing gender stereotypes, logistic regression was also used. It was predicted that almost every book with a known gender being male or female would enforce gender stereotypes because even though explicit gender bias occurs less frequently today, implicit attitudes still exist and are represented within children's literature (Casey et al., 2021).

Also, it was predicted that there will be more male main characters than any other gender category in younger age categories than older, in accordance with the findings of Casey et al. (2021). The researcher found this statistical information individually for the English and Spanish books. The researcher used multiple regression since it focuses on multiple independent variables (Aberson, 2019, p.112).

It was also predicted that there will be a greater number of male characters and gender stereotype enforcement in early children's literature in Spanish over English books because research has shown that gendered languages tend to express more sexist views than naturally gendered languages, and these views start at a young age (Wasserman & Wesley, 2009). The research performed a Chi-Square Test of Independence to quantify these variables. An alpha level of significance of .05 will be

used to determine if the results are statistically significant. This test was selected because it looks for differences between different factor levels, as well as a correlation between measurements (Casey et al., 2021).

### **Delimitations, Assumptions, and Limitations**

There were a couple of delimitations that the researcher decided to use. The main delimitation was that the research focused on books chosen by NYPL because there are endless amounts of children's books. Narrowing down the selection helped the researcher not only focus on what is relevant to the specific population but what was selected by trusted sources in their appropriate countries. Also, even though these are both lists representing each language they are still quite different selections. NYPL's selections were based on choices from only librarians, not teachers or people from other backgrounds. There are also more English books than Spanish books on the lists.

Another delimitation was that the researcher decided to use only the book's title and description for their research. This method was done because previous researchers, such as Casey et al. (2021), Aley & Hahn (2022), and Xu et al (2019), have shown this method to be the most simplistic but straightforward method of analyzing the material.

There are also assumptions made for this data collection. The assumption of this research within children's books, there will be two separate genders and then the unknown gender. The researcher assumes that there will be female characters, male characters, and then characters that will not have any gender. Another assumption is that the main character will be described in the title or within the brief description of the book.

Lastly, there are various limitations within this research. One of the major limits is that it is only comparing two of the many languages spoken in the world. It is also

comparing only two of the four degrees of genderless languages. These language-related limits narrow the ways of comparing gender bias across languages. Also, using only two lists from one source narrows the number of books used. There are many current children's books published each year, and the books on this list, though put on by a reputable source, only skim the surface of the examples of the books that there are in each language. Lastly, only using three variables to determine the book's gender bias can be limiting because it does not account for the words throughout the entire book as well as the imagery.

### **Summary**

This chapter provided an overview of the methodology of the research at hand. The data detailed information on how the content analysis was performed using children's literature. It also provided an operational explanation of the variables being used, a method of coding as well as the data analysis once the coding is completed. The next chapter provides a summary of the descriptive results as well as the study's findings.

## CHAPTER 4: RESULTS

### Overview

The purpose of this quantitative content analysis study was to compare how gender bias is shown in natural gender language and grammatical gender language within the context of children's literature. This study researched gender biases found in the natural gender language of English to the grammatical gender language of Spanish. The data was collected using the Best Books of 2021 and Best Books of 2022 lists from the NYPL. The books were then divided between the English list and the Spanish list, and anything that was bilingual was taken out of the data collection process. Each book was then analyzed by the main character's gender, whether or not it enforced gender stereotypes, and which age group the target audience was.

The first research question asked: In what ways are gender biases found within natural gender languages within children's literature? The researcher broke down this question into three sub-questions for analysis. The first sub-question was: Is one main character's gender more frequent than the others? The second sub-question was: Are there more books that enforce gender stereotypes than those that do not? The third sub-question was: Was there a relationship between a specific gender and whether the book enforced gender stereotypes?

The second research question asked: In what ways are gender biases found within grammatical gender languages within children's literature? Similarly, to the first question, the researcher broke down this question into three sub-questions for analysis. The first sub-question was: Is one main character's gender more frequent than the others? The second sub-question was: Are there more books that enforce gender stereotypes than

those that do not? The third sub-question was: Was there a relationship between a specific gender and whether the book enforced gender stereotypes?

The third research question was: What are the differences, if any, in gender biases in children's literature between natural gender language and grammatical gender language? Within this question, the researcher compared the results from the first and second research questions to determine this answer. The rest of this chapter shows the data analysis and any significant findings.

### **Descriptive Results**

The New York Public Library websites provided access to the Best Books of 2021 and the Best Books of 2022. These lists contained English, Spanish, and bilingual options. For the purpose of this study and the descriptive results below, bilingual books were not included in this study. According to Table 2, 263 books were analyzed, of which 192 were in English and 71 were in Spanish.

**Table 2**  
*Amount of Books by Language*

<i>Language</i>	N	%
English	192	73.0%
Spanish	71	27.0%

Out of the English books, 43.2% of the books had female main characters, according to Table 3. Also, according to Table 4, 57.3% of the English books did not enforce gender stereotypes. As for the target audience, according to Table 5, 1.6% were



for infants/toddlers, 36.5% were for preschoolers, 41.1% were for early elementary age, 18.8% were for middle elementary age and 2.1% were for late elementary age.

**Table 3**

<i>English Main Character Gender</i>		
	N	%
Male	51	26.6%
Female	83	43.2%
Unknown	39	20.3%
Multiple	19	9.9%

**Table 4**

<i>English Books Enforcing Gender Stereotypes</i>		
	N	%
Yes	82	42.7%
No	110	57.3%

**Table 5**

<i>English Target Audience</i>		
	N	%
Infant/Toddler	3	1.6%
Preschool	70	36.5%
Early Elementary	79	41.1%
Middle Elementary	36	18.8%
Late Elementary	4	2.1%

Out of the Spanish books, 38% of the books had female main characters according to Table 6. Also, according to Table 7, 66.2% of the Spanish books did not enforce gender stereotypes. As for the target audience, according to Table 8, 8.5% were for infants/toddlers, 57.7% were for preschoolers, 26.8% were for early elementary age,

7% were for middle elementary age and none of the books were targeted for late elementary age.

**Table 6**

*Spanish Main Character Gender*

	N	%
Male	19	26.8%
Female	27	38.0%
Unknown	21	29.6%
Multiple	4	5.6%

**Table 7**

*Spanish Books Enforcing Gender Stereotypes*

	N	%
Yes	24	33.8%
No	47	66.2%

**Table 8**

*Spanish Book Target Audience*

	N	%
Infant/Toddler	6	8.5%
Preschool	41	57.7%
Early Elementary	19	26.8%
Middle Elementary	5	7.0%

### Assumption Tests

A Chi-Square Test of Independence was performed to assess the relationship between the main character's gender and enforcing stereotypes. As shown in Table 9, there is a significant relationship between the English books' main characters' gender and enforcing gender stereotypes,  $X^2(3, N=192) = 51.029, p < .001$ . Books with female main

characters are more likely to enforce gender stereotypes than books with male main characters and multiple main characters.

**Table 9**

*English Main Character Gender \* English Books Enforcing Gender Stereotypes Crosstabulation*

		English Books Enforcing Gender Stereotypes				Total	
		Yes		No			
		N	%	N	%	N	%
English Main Character Gender	Male	36	43.9%	15	13.6%	51	26.6%
	Female	42	51.2%	41	37.3%	83	43.2%
	Unknow n	0	0.0%	39	35.5%	39	20.3%
	Multiple	4	4.9%	15	13.6%	19	9.9%
Total		82	100.0%	110	100.0%	192	100.0%

*Chi-Square Tests*

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	51.029 <sup>a</sup>	3	<.001
Likelihood Ratio	65.672	3	<.001
Linear-by-Linear Association	38.263	1	<.001
N of Valid Cases	192		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.11.

A Chi-Square Test of Independence was performed to assess the relationship between the Spanish books' main characters' gender and enforcing stereotypes. As shown below in Table 10, there is a significant relationship between the main character's gender and enforcing gender stereotypes,  $\chi^2(3, N=71) = 17.157, p < .001$ . Books with

female main characters are more likely to enforce gender stereotypes than books with male main characters and multiple main characters.

**Table 10**

*Spanish Main Character Gender \* Spanish Books Enforcing Gender Stereotypes Crosstabulation*

		Spanish Books Enforcing Gender Stereotypes				Total	
		Yes		No			
		N	%	N	%	N	%
Spanish Main Character Gender	Male	8	33.3%	11	23.4%	19	26.8%
	Female	15	62.5%	12	25.5%	27	38.0%
	Unknow n	0	0.0%	21	44.7%	21	29.6%
	Multiple	1	4.2%	3	6.4%	4	5.6%
Total		24	100.0%	47	100.0%	71	100.0%

*Chi-Square Tests*

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.157 <sup>a</sup>	3	<.001
Likelihood Ratio	23.382	3	<.001
Linear-by-Linear Association	7.102	1	.008
N of Valid Cases	71		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 1.35.

## Study Findings

### Research Question 1

RQ1: In what ways are gender biases found within natural gender language within children's literature?

H01: There are no forms of gender bias within natural gender language within children's literature

HA1: There are multiple ways of gender biases found within natural gender language within children's literature such as one main character's gender more frequently than the others, most books enforcing gender stereotypes, and a relationship between a specific gender and whether the book enforced gender stereotypes.

The first research question sought to find what ways gender biases are found within natural gender languages within children's literature. The researcher had to break this question down this question into three sub-questions for analysis.

#### ***First Sub-Question***

The first sub-question of Research Question One was to find out if there was one main character's gender more frequent than the others. This was determined within Table 3, in which it was discovered that 43.2% of books had female main characters.

#### ***Second Sub-Question***

The second sub-question asked if more books enforce gender stereotypes than those that do not. According to Table 4, 57.3% of the English books did not enforce gender stereotypes.

#### ***Third Sub-Question***

The third sub-question asked if there was a relationship between a specific gender and whether the book enforced gender stereotypes. For this question, the researcher only used three genders, male, female, and multiple because all books with unknown gendered main characters were given a "no" answer to reinforcing gender stereotypes. This was

done because there was no way to determine a gender stereotype when there was no known gender. As shown in Table 9, there is a significant relationship between the main character's gender and enforcing gender stereotypes. Books with female main characters are more likely to enforce gender stereotypes than books with male main characters and multiple main characters.

## **Research Question 2**

RQ2: In what ways are gender biases found within grammatical gender language within children's literature?

H02: There are no forms of gender bias within grammatical gender language within children's literature

HA2: There are multiple ways of gender biases found within grammatical gender language within children's literature such as one main character's gender more frequently than the others, most books enforce gender stereotypes, and a relationship between a specific gender and whether the book enforced gender stereotypes.

The second research question sought to find what ways gender biases are found within grammatical gender languages within children's literature. The researcher had to break this question down this question into three sub-questions for analysis.

### ***First Sub-Question***

The first sub-question of Research Question Two was to find out if there was one main character's gender more frequently than the others. This was determined within Table 6, in which it was discovered that 38% of books had female main characters.

### ***Second Sub-Question***

The second sub-question asked if more books enforce gender stereotypes than those that do not. According to Table 7, 66.2% of the Spanish books did not enforce gender stereotypes.

### ***Third Sub-Question***

The third sub-question asked if there was a relationship between a specific gender and whether the book enforced gender stereotypes. For this question, the researcher only used three genders, male, female, and multiple because all books with unknown gendered

main characters were given a “no” answer to reinforcing gender stereotypes. This was done because there was no way to determine a gender stereotype when there was no known gender. As shown in Table 10, there is a significant relationship between the main character’s gender and enforcing gender stereotypes. Books with female main characters are more likely to enforce gender stereotypes than books with male main characters and multiple main characters.

### **Research Question Three**

RQ 3: What are the differences, if any, in gender biases in children's literature between natural gender language and grammatical gender language?

H0 3: There are no differences in gender biases in children's literature between natural gender language and grammatical gender language.

HA 3: There are multiple differences in gender biases in children's literature between natural gender language and grammatical gender language.

Research question three asked what the differences are, if any, in gender biases in children's literature between natural gender language and grammatical gender language.



Within this question, the researcher compared the sub-question results from the first and second research questions to determine this answer.

### *Comparing Results from Sub-Questions One*

The natural gender language of English's results showed that the most frequent main character's gender was female. The grammatical gender language of Spanish's results showed that the most frequent main character's gender was also female.

### *Comparing Results from Sub-Questions Two*

The natural gender language of English's results showed that most English books did not enforce gender stereotypes. The grammatical gender language of Spanish's results showed that most of the Spanish books also did not enforce gender stereotypes.

### *Comparing Results from Sub-Question Three*

The natural gender language of English's results showed books with female main characters were more likely to enforce gender stereotypes than books of other genders. The grammatical gender language of Spanish's results also showed books with female main characters were more likely to enforce gender stereotypes than books of other genders.

## **Summary**

There needs to be more research on the degree of gender in a person's native language and the development of gender bias. This quantitative content analysis study's purpose was to compare how gender bias is shown in natural gender language and grammatical gender language within the context of children's literature. Within this study, there were multiple key findings related to this topic. The first finding was that both lists of books had more female main characters than any other gender. Another key finding is that the majority of both book lists did not enforce gender stereotypes. Lastly,

if any books were reinforcing gender stereotypes, they were most likely to be female over male. The next and final chapter of this dissertation will discuss these results, compare them to previous research, as well as discuss this research's limits, implications, and recommendations for future research.

## CHAPTER 5: DISCUSSION

### Overview

The purpose of this quantitative content analysis study is to compare how gender bias is shown in natural gender language and grammatical gender language within the context of children's literature. This chapter summarizes and discusses the study's findings. This chapter also discusses the study's implications, limitations, and recommendations for future studies.

### Summary of Findings

#### Research Question 1

The first research question sought to find what ways gender biases are found within natural gender languages within children's literature. The researcher had to break this question down this question into three sub-questions for analysis. The first sub-question asked: Was one main character's gender more frequent than the others? The findings showed that 43.2% of books had female main characters according to Table 3. The second sub-question asked if more books enforce gender stereotypes than those that do not. The findings showed that 57.3% of English books did not enforce gender stereotypes. The third sub-question asked if there was a relationship between a specific gender and whether the book enforced gender stereotypes. The findings showed that books with female main characters are more likely to enforce gender stereotypes than books with male main characters and multiple main characters.

#### Research Question 2

The second research question sought to find what ways gender biases are found within grammatical gender languages within children's literature. The researcher had to break this question down this question into three sub-questions for analysis. The first sub-

question was to find out if there was one main character's gender more frequently than the others. The findings discovered that there were frequently more female main characters than male, multiple genders, and unknown gender of main characters. The second sub-question asked if more books enforce gender stereotypes than those that do not. The findings showed that 66.2% of the Spanish books did not enforce gender stereotypes. The third sub-question asked if there was a relationship between a specific gender and whether the book enforced gender stereotypes. The findings showed that books with female main characters are more likely to enforce gender stereotypes than books with male main characters and multiple main characters.

### **Research Question Three**

Research question three asked what the differences are, if any, in gender biases in children's literature between natural gender language and grammatical gender language. Within this question, the researcher compared the sub-question results from the first and second research questions to determine this answer. Comparing both of the sub-question ones' results, both languages showed that the most frequent main character's gender was female. Comparing both of the sub-question twos' results, both languages showed that most of the books did not enforce gender stereotypes. Comparing both of the sub-question threes' results, both languages showed that books with female main characters were more likely to enforce gender stereotypes than books of other genders.

### **Discussion of Findings**

This section discusses the meaning behind this study's findings of the differences and similarities between the natural gender language and grammatical gender language. It compares these findings to the literature that was reviewed in Chapter 2. Also, this

section discusses how these findings fit into the biblical foundation also reviewed in Chapter 2.

## **Discussion of the Differences Found Between the Languages**

### ***Natural Gender Language***

Previous research has revealed that natural gendered languages do not commemorate their grammar by gender, and the majority of nouns are dependent forms that are considered neutral (Stahlberg et al., 2007). Also, research has found that natural gender languages tend to be more successful at promoting gender inclusion because they can lead to the creation of a gender-neutral option for children to learn (Prewitt-Freilino et al., 2012). Due to this research, it would have been suspected that there would have been a higher percentage of main characters of unknown gender found within this book than in the Spanish book list. Within this study the opposite results were found; the English book list had a lesser percentage of unknown gendered main characters than the Spanish list. The Spanish list had an even higher percentage of unknown gendered main characters than it did of male main characters.

### ***Grammatical Gender Language***

As for the grammatical gender language of Spanish's list of children's books, there were some unexpected comparisons found. The literature review mentioned that previous research has revealed that grammatically gendered languages have higher ratings of sexism world expands gendered languages (Harris et al., 2017). This is an interesting result because this study found that the grammatical gender language list had a higher percentage of books that did not reinforce gender stereotypes, compared to the natural gender language book list. This demonstrates different data from previous

research that the theory of grammatical not only gender boosts sexist attitudes (Wasserman & Weseley, 2009).

It was also found that there was a higher percentage of unknown gendered main characters within the grammatical gender language than in the natural gender language. This is also interesting because within this language objects are semantically and randomly tied to gender, which varies by language so there would be a higher inclination to define a person by their gender than a natural gender language (Gygax et al., 2019).

### **Discussion of the Similarities Found Between Both Languages**

As mentioned in Chapter 2, children are more likely to be surrounded by significantly higher amounts of male than female literary characters (Harris et al., 2017). Within both sub-questions ones', this study has found that there were more female main characters than any other kind. Having more female main characters over male main characters, gender-neutral main characters, and unknown-gender main characters is significant because most cultures represent males as the dominant group (Fiske & Taylor, 2021). This could help prevent the biased attitude that leads to the exclusion of women, which tends to result in increased gender stereotyping and gender-stereotypical behavior (Halim, 2016).

As mentioned in chapter two, learning word order via syntax, such as mentioning boys first within the phrase *boys and girls* leads to learning how social hierarchies exist within a culture (Gygax et al., 2019). Having more female main characters than anyone could potentially help unlearn social hierarchies built within each culture because males are mentioned less throughout these stories.

Within both sub-questions twos', the majority of both lists did not reinforce gender stereotypes. The literature review mentioned that research has shown that

gendered languages, such as Spanish, produce a stimulus to express a more sexist attitude than naturally gendered language (Wasserman & Weseley, 2009). This current study has not found this idea to be the case because it has found that both languages are more likely to not enforce gender stereotypes which lead to the stimuli for sexist attitudes.

Within both sub-questions threes', these findings showed that both English and Spanish books with female main characters are more likely to enforce gender stereotypes than books with male main characters and multiple main characters. These findings help support multiple theories mentioned in Chapter 2. The first theory it supports is the "Cinderella Complex" which is the concept that stories are structured to enhance the stereotypical incompetence of women (Xu et al., 2019).

These results have shown that children of this age are more likely to be involved in stereotypical gender-related activities (Halim, 2016). According to Table 5, 77.6% of the English and according to Table 8, 84.5 % of the Spanish books were written for preschool and early elementary ages. In turn, having more books within this target audience with female main characters enforcing gender stereotypes helps support the research Halim (2016).

Lastly, there is a noteworthy influence on these books and children's cognitive development. As mentioned in Chapter 2, pretend play is a part of a child's cognitive growth and helps reinforce the idea of what gender is (Bornstein & Lamb, 2011). Reading to a child can help shape the ways they are playing pretend and if they are being read books that when enforcing gender stereotypes, focus on females, it can help shape how they perceive their future pretend play and build upon their gender stereotypes and biases. Towards the end of early elementary school, pretend play decreases, and the child begins to understand their gender is irreversible, which is why it is important to

understand how the children are playing pretend and what their influences are (Golden & Jacoby, 2018).

### **Discussion Related to the Biblical Foundation**

This study is consistent with the biblical foundation found within Chapter 2. The Biblical research has shown that the Lord does want equality among the genders since we are all one in the eyes of Christ (*King James Bible*, 1769/2017, Galatians 3:28). This study shows this equality by the idea that most of the books do not enforce gender stereotypes which teach children biases. These results also show that even though these books are secular, they are adapting to what the Lord wants.

This study also agrees with Proverbs 22:6, that what we train or teach our children at a young age is important (*King James Bible*, 1769/2017). Most of these books are written for children between preschool and early elementary school. Previous research has shown that this is a crucial age, and this study emphasizes that the current books within both languages are more likely to not only avoid gender stereotypes but have an increase of female characters which demonstrated different data from previous research.

Lastly, another theory found within this research related to its biblical foundation is the construct of gender. The study's results surprisingly found that more of the books had more female main characters than male which is not consistent with the Bible. However, the results did show that the books with female main characters emphasize female stereotypes which perpetuates gender bias. This perpetuation of gender bias can be found throughout the Bible and biblical research (Mojola, 2018).

### **Implications**



This study features the value of the similarities and differences concerning natural and grammatical gender languages in terms of gender bias. The current study's results show implications for caretakers, educators, the scientific community, and the church.

Caretakers and Educators who read to their children can take comfort in this study. Both natural and grammatical gender language caretakers who read to their children this study shows that most of the current grammatical gender language children's books are less likely to reinforce gender stereotypes but also only have more female and unknown gender main characters than male main characters. This is especially important for the grammatical gender language speaking caretakers because, unlike previous research, which states that reading grammatical gender languages to children can help reinforce sexist attitudes (Wasserman & Wesseley, 2009). Since there are so many different children's books in the world, a suggestion for caretakers and educators would focus on lists, such as this New York Public Library lists to buy or borrow books from because these books are selected by experts (Sherwood, 2022). If caretakers and educators do realize the importance of lists such as these, then they can help push it as a policy in schools and local libraries to have books that not only promote gender equality but also decrease gender bias within their respective languages across their towns and districts.

The implications for the scientific community are based on the idea that this study does demonstrate different data from previous research. Most research has shown that the level of gender prejudice has been associated with the degree of gender within languages, with grammatical gender language being the highest (DeFranza et al., 2020). Researchers could analyze more current examples of what influences gender bias development.

Based on this research, there are also implications for the church by helping it emphasize the importance of reducing gender bias in its teaching by emphasizing female main characters as often as male ones. Though I do realize in the Bible that there are very important stories that must be taught, church leaders who teach young children could become more aware of what they are teaching. These teachers could make sure they are emphasizing the great women in the Bible, such as Mary of Nazareth, Mary Magdalene, and Ruth the Moabite.

### **Limitations**

There are multiple limitations of this study on gender bias and language. An important limitation is that even though these results discuss the differences between both book lists, the English book list was more than double the number of the Spanish one. This limit most likely impacted the study because the results revealed more commonalities with both languages, which went against previous research. To limit this issue, having an equal number of books could have led to statistically different outcomes.

Another limitation is that the book list only comes from one source, the New York Public Library. Having one source impacts the study because the librarians who selected the literature all came from the same location and could prefer types of books. Especially since librarians are traditionally a female profession which could sway the selection of books with female main characters. Having non-librarians or even making sure both males and females equally take part in the selection process could change the bias within having more female main characters.

Using different sources could have led to different conclusions because it can give a wider selection of data. Even though the New York Public Library is a credible source, having a Spanish list from a source that primarily spoke Spanish could have led to a

different selection of books and, therefore, different results. To limit the threat of this issue, having a Spanish list from a primarily Spanish-speaking country of origin could change the selections and, therefore, limit the threat.

Lastly, comparing only two different languages limits the comparison of the two types of gendered languages. This limit potentially impacted the study because there are thousands of languages in the world and assuming based on two languages may not accurately portray accurate results. Comparing multiple grammatical gender languages and natural gender languages would draw a more sufficient comparison of the two degrees of gender languages. Even more so, comparing multiple languages from all of the degrees of gender languages would be even more efficient. A larger comparison could expand upon this research to indicate the connection more accurately between gender bias and language development through children's literature. These limits are important to address because future researchers could find even more ways to decrease them.

### **Recommendations for Future Research**

A recommendation for future research would be that they can use this study to not only support some of the previous research on this topic but also expand upon it. They can expand upon this research by not only comparing more book recommendation lists but also more languages. Since there are different degrees of languages such as grammatical gender language, natural gender language, a combination of grammatical gender and natural gender, and genderless language (Prewitt-Freilino et al., 2012), there could be thousands of different possibilities that researchers can compare.

Another recommendation for future research would be that they also focus on other forms of gender bias in media. Research has found gender bias is shown within not only books but also movies, television shows, and even advertisements (Aley & Hahn,

2020). Future researchers could perform a similar study as this one but instead of using literature as the form of content, they could use one of the many other forms. This potential future research could also compare multiple languages to further expand upon the idea that gender bias is represented in different degrees depending on the degree of gender language.

### **Summary**

This quantitative content analysis study was able to add to the pre-existing research on gender bias development as well as the degrees of gender languages. The research results found more similarities than differences in gender bias within natural gender language and grammatical gender language within the context of children's literature. The results were that both languages had more female main characters than any other gender, which demonstrates different data from previous research. Also, within both languages, the key result was that most books did not enforce gender stereotypes and those books that did reinforce gender stereotypes were more likely to have female main characters. Though this research does have its limits, its implications affect caretakers, educators, and future research.

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## APPENDIX A: IRB APPROVAL

**LIBERTY UNIVERSITY.**  
INSTITUTIONAL REVIEW BOARD

August 31, 2023

Kaleigh Smolinski  
Joyce Brady

Re: IRB Application - IRB-FY23-24-319 GENDER BIAS IN NATURAL GENDER LANGUAGE AND GRAMMATICAL GENDER LANGUAGE WITHIN CHILDREN'S LITERATURE

Dear Kaleigh Smolinski and Joyce Brady,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds that your study does not meet the definition of human subjects research. This means you may begin your study with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your study is not considered human subjects research because

- (1) it will not involve the collection of identifiable, private information from or about living individuals (45 CFR 46.102).
- (2) "scholarly and journalistic activities (e.g., oral history, journalism, biography, literary criticism, legal research, and historical scholarship), including the collection and use of information, that focus directly on the specific individuals about whom the information is collected," are not considered research according to 45 CFR 46.102(l)(1).

Please note that this decision only applies to your current application. Any modifications to your protocol must be reported to the Liberty University IRB for verification of continued non-human subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at [irb@liberty.edu](mailto:irb@liberty.edu).

Sincerely,

**G. Michele Baker, PhD, CIP**  
*Administrative Chair*  
**Research Ethics Office**

## APPENDIX B: NUMBER OF BOOKS WITH EACH VARIABLE

**Table 1. Number of books with each variable**

<b>Variable</b>	<i>N1 (English)</i>	<i>N2 (Spanish)</i>
<i>Main Character Gender:</i>		
Female		
Male		
Unknown		
<i>Target Audience:</i>		
infant/toddler		
Preschool		
early elementary		
middle elementary		
late elementary		
<i>Enforcing Gender Stereotypes</i>		
Yes		
No		