Interpretation of Grammatical Gender Among English Monolingual Speakers

Diego De Gregorio
Lindenwood University

Interpretation of Grammatical Gender Among English Monolingual Speakers

Diego De Gregorio

Department of Psychology, Sociology, and Public Health, Lindenwood University

Author Note

Diego De Gregorio https://orcid.org/my-orcid?orcid=0000-0001-6775-5238

Correspondence concerning this article should be addressed to Diego De Gregorio, 209 S

Kingshighway, St. Charles, MO 63301. Email: dd246@lindenwood.edu

Abstract

This research project aimed to discover how English monolingual speakers interpret the idea of grammatical gender, and if they have an innate bias toward associating common English nouns to the masculine gender. My hypothesis was that participants would assign a masculine grammatical gender to words at a greater than chance due to an existent internalized genderism/sexism within the participants. To gather data, a Qualtrics survey was designed to test participants. Said survey was limited to people who only speak English and contained 10 different common nouns. After the presentation of each noun, participants were given two options: masculine or feminine. They had to indicate the perceived gender per each noun. After gathering the data, the number of words the participants assign as masculine were compared against the expected value of 5 out of 10 using a one-way chi-square analysis. The proportion of common English nouns assigned to the masculine gender, ($M = 5.52$, $SD = 1.2$) differed from chance, $\chi^2(1, N = 113) = 38.6$, $p = .00001$. Additionally, the results of the study hinted toward English monolingual speakers having biases when assigning gender to common English nouns – assigning masculine more than feminine to the list of nouns. These findings may also be indicative of possible sexist/genderist believes in English monolingual speakers when conceptualizing language.

Keywords: grammatical gender, monolingual, masculine, feminine, genderism, sexism

Interpretation of Grammatical Gender Among English Monolingual Speakers

Grammatical gender is used to subdivide and organize nouns. For example, in Italian, grammatical gender includes masculine terms for men (*il bambino* "the young boy") and feminine ones for women (*la bambina* "the little girl"); (Audring, 2016). In the English language, there is not any type of grammatical gender. For example, the phrase "the paper" translates to "*el papel.*" In Spanish, the prefix "*el*" denotes that the noun is masculine. In contrast, the word "the" is a gender-neutral prefix used for all nouns. Even though both share the same purpose - to describe a noun, the Spanish language uses gender. Furthermore, in Spanish, the masculine plural is used for any group that includes a male member, regardless of proportion. (Wasserman & Weseley, 2009).

In a study conducted by Lew-Williams and Fernald (2007), it was concluded that grammatical gender plays an important role in sentence interpretation. They gathered a group of Spanish-learning children between 34 to 42 months of age and tested them with an eye tracking procedure. The children were shown pairs of images with names of the same grammatical gender (*la pelota,* ''ball [feminine];'' *la galleta*, ''cookie [feminine]'') or different grammatical gender *la pelota* [feminine]; *el zapato,* ''shoe [masculine]'') The children were much faster when interpreting the images that had the same grammatical gender than on same-gender trials. It can be inferred that grammatical gender might have other impacts in the human mind, other than just dividing words.

Surely, it is also safe to assume that the grammatical structure of languages may promote sexism and genderism in society (De Lemus & Estevan-Reina, 2021). Studies conducted in the past hint toward a more biased response coming from bilingual participants who happen to know Spanish, Portuguese, or French. Wasserman and Weseley (2009) found participants who were

bilingual in Spanish and English showed higher levels of sexist tendencies when measured with the Neosexism Scale (Tougas et al., 1995) than English monolingual speakers. They concluded in their discussion how this might be influenced by the grammatical gender in the Spanish language.

Nonetheless, no substantial study has been undertaken on how English speakers grasp the concept of assigning gender to common nouns. Similarly, no research has been conducted that demonstrates a possible inherent bias on the part of English speakers when they design their own grammatical gender by assigning gender to nouns. The present study aims to close the gap in the literature by exploring questions such as, do English monolingual speakers understand the concept of grammatical gender? And do they happen to show an inclination toward assigning the masculine gender to common nouns?

In this project, two main objectives were put into practice. The first was to determine how English speakers would assign grammatical gender to a common noun without having any preconceived perspective on the matter, and secondly, whether English speakers had an inherent bias towards assigning words the masculine gender. A questionnaire was posted online, and participants' perception on grammatical gender was tested and analyzed to answer the research questions.

Method

Participants

Participants in the study had to be over the age of 18 and not speak any other language than English to be eligible to participate. Knowing more than one language was understood as being able to communicate in a language other than English. This was to avoid including

COMMON NOUNS AND GENDER 5

individuals who may have possible preconceptions about grammatical gender they may carry over from another language they speak.

Participants were chosen using two ways. The study was first advertised on the Lindenwood Participant Pool (LPP), a Lindenwood University subject pool that recruits Lindenwood University students to take part in research studies. Lindenwood faculty members supervise these studies, and students who engage in research through the LPP receive LPP credits. LPP credits can be converted into bonus points for the students toward their LPP-participating class. In the case of this study, participants from the LPP received two LPP credits for their participation for an eligible class of their choosing. Participants in the LPP were required to log in to their Sona Systems account, travel through the portal, and choose the project.

As a second strategy, users from Instagram and Twitter were encouraged to join by publishing a link. A quick invitation message was shared in an "Instagram Story" as well as a tweet, along with the link and a brief explanation of the study. Participants gathered via social media were required to click the link posted on the "Instagram Story" in the case of Instagram, and on the tweet in the case of Twitter; all of this in cooperation both Instagram's and Twitter's terms and services. The study's ethical criteria were assessed by the Lindenwood Institutional Review Board and the Lindenwood Psychology Program Scientific Review Committee.

There was a sample of ($N = 113$) participants for this study. Eighty-six of them were women, 24 were men, and three were non-binary. Participants were predominantly younger than 25. The youngest participant was 18 years old, while the oldest was 73 ($M = 30.61$, $SD = 13.2$). The participants were predominantly White or European American with 106 participants having

selected that race; there were also five Black or African American; one Native American; and one Asian participating in the study.

Materials and Procedure

A Qualtrics survey was designed (see Appendix A) consisting of a consent statement that participants had to agree to before being able to continue; a set of five different demographic questions (if participants were at least 18 years of age, exact age of the participant, whether the participant knew another language besides English, gender, and race/ethnicity); the main task; and an end of survey message. The Qualtrics survey was coded in such a fashion that if participants failed to meet the requirements of age or the language restriction, they would be booted out of the survey.

In the main task of the study, after having confirmed to have read the instructions, participants were provided with a list of 10 common English nouns. They had 10 s to assign a gender (either masculine or feminine) to each word. The 10 words were presented to each participant in the same order. The Qualtrics survey was available in two different versions: one in which the feminine gender is shown as the first choice (See Appendix B), and the other in which the masculine gender is presented before the feminine gender (see Appendix C). A randomizer was implemented to ensure that half of the participants would receive each version.

Additionally, a strict process to filter the word selection was put into place: the 10 nouns from the list are not normally taught in introductory language courses, they were limited to gender neutral objects; and, in Spanish, half of the nouns are masculine, and the other half are feminine. This because most English monolingual speakers that remember taking elementary Spanish or French, could potentially recall the Spanish word, *árbol* (tree), for example, a masculine word. Also, it was of extreme importance to not list any words that might rely on a

gender or sex identity in the English language, like kitten, for instance. Having words like kitten would defeat the purpose of the study since the gender identity of the word would be tied to its biological sex, rather than the concept and participants' personal opinions – what is being studied. Lastly, 50% of the words were masculine, and the remaining 50% were feminine in the Spanish language since Spanish was the main language used to contrast the words used for the study.

The survey had two different feedback letters. One for the participants who did not meet the participation requirements, and the other for those who did (See Appendix A). The first feedback letter contained a list of possible reasons for being booted out (not being 18 or knowing more languages besides English), the rationale behind the study, and the researchers' contact information. The second feedback letter - meant for participants who completed the entire survey, had the rationale behind the study, and the researchers' contact information.

Finally, when gathering data, the Qualtrics filtering feature was used to write down the data from the demographic questions in an Excel sheet, i.e., age, gender, and race/ethnicity. After the data were gathered from the Qualtrics survey, the Excel "COUNTIF" formula was used for each one of the 10 nouns to find how many times participants assigned the word to the masculine gender. In addition, percentages were calculated in the same Excel document to also represent the proportion and incidence in which English monolingual speakers assigned the masculine gender to each common word.

A one-way chi-square analysis was conducted to determine whether participants' responses differed from chance and therefore whether there was an inherent genderism in English speakers when assigning gender to words. The measurement consisted in the prevalence of said variables: the number of times in which participants selected either gender for each

individual word as the measure to address which gender is associated with each individual word, and the percentage of the nouns assigned as masculine to measure inherent biases.

Demographic variables were analyzed by IBM SPSS Statistics (Version 28) using descriptive statistics to count the participants; Excel formulas were used for the prevalence and percentages in which participants assigned words to the masculine gender; and finally, for the chi-square analysis, the Social Science Statistics (https://www.socscistatistics.com/pvalues/chidistribution.aspx) online calculator was used to determine if the proportion of common English nouns assigned to the masculine gender differed from chance (chi-square analysis).

Results

Of the 208 participants who completed the survey, 113 (54.3%) participants were included in the results section, this since only 153 (74%) were English monolinguals, 13 (6.7%) were cut off due to incomplete data, and 27 (13%) participants' data were lost. Therefore, the final count of total participants was of 113. Out of the 113 participants, 61 took the first version of the Qualtrics survey (Feminine Before Masculine Version), and the remaining 52 took the second version of the Qualtrics survey (Masculine Before Feminine Version).

For this study, it had been hypothesized that participants would assign a masculine grammatical gender to common nouns at a greater than chance due to an existent internalized genderism/sexism within the participants. Using Excel, it was possible to assess an average of which gender (masculine or feminine) each common noun was associated to. On average, English monolingual speakers associated the common English nouns to the masculine gender ($M = 5.5$, $SD = 1.2$) more frequently than to the feminine gender ($M = 4.5$ $SD = 1.2$). For the word grass, 54.9% of the participants assigned the masculine gender to it; 92% to shovel; 76% to tent;

8% to mirror; 28.3% to air; 89.4% to helmet; 66.4% to ambulance; 21.2% to lamp; 62% to cellphone; and 83.2% to boomerang, respectively (See Appendix D). As per mentioned, the participants perceived most words to be masculine. And as consistent to the hypothesis, the proportion of subjects who assigned the masculine gender to common English nouns differed from chance, $\chi^2(1, N = 113) = 38.6$, $p = .00001$. Lastly, the time it took for participants to complete each task was analyzed, as well as the task completion average of every participant combined ($M = 2.3$, $SD = 0.76$).

Discussion

Two key objectives were implemented in this project. The first was to see how English speakers would assign grammatical gender to common nouns without any preconceived notions, and the second was to see if English speakers had an innate bias toward assigning masculine gender to terms. The findings provided insight into how English speakers think about grammatical gender on their own, as well as a probable bias whenever it comes to noun interpretation by English monolinguals - as hypothesized, English monolingual speakers assigned the masculine gender to nouns at a greater than chance.

The results showed an interesting pattern where participants would assign the masculine gender to words normally portrayed as rough and rugged. For example, the words shovel, helmet, and boomerang got the highest percentages of masculine interpretation (92%; 89.4%; and 83.2%, respectively). However, on the other hand, words like mirror and lamp got the lowest scores of masculine interpretation (8%; and 21.2%, respectively). These two terms can be analyzed in the same way. Given that mirror may be linked with beauty and care, and lamp can be an equivalent of support and direction – frequently resembling a feminine figure - it's fair to presume that participants assigned feminine to these two terms due to this.

There were other words that did not have the highest scores, but still had a clear common interpretation from participants. For example, tent, ambulance, and cellphone (76%; 66.4%; 62%, respectively). Surprisingly, although gender-neutral, participants decided to choose masculine over feminine. The study's most intriguing conclusion is that most participants linked the word air with the feminine gender. However, the reason behind this remains a mystery. It's possible that people identify nature terms with words like "Mother Nature" or a nurturing feminine character.

Previous research has suggested that bilingual individuals who speak Spanish, Portuguese, or French had a more prejudiced reaction. When tested using the Neosexism Scale (Tougas et al., 1995), individuals who were bilingual in Spanish and English had greater levels of sexist inclinations than English monolingual speakers, according to Wasserman and Weseley (2009). They concluded that the grammatical gender in the Spanish language may have play a part in this. Given the results of this study, it can be inferred that English monolingual speakers can also be capable of having certain biases and sexist ways of thinking, in this case, when conceptualizing grammatical gender. That is why it was of extreme importance to not accept any participants that spoke other languages other than English, due to the possible biases they might have had when answering the questions.

As previously mentioned, the survey had two versions, (Feminine Before Masculine Version, and Masculine Before Feminine Version) this due to the possible promotion of sexism by mentioning the masculine gender before the feminine, in lines to what De Lemus and Estevan-Reina (2021) conclude in their study (structure in language my promote sexism/genderism). Notably, there were no substantial differences worth mentioning between the responses in both versions. The interpretations stayed congruent throughout, regardless of the

order in which they were presented. This was a pleasant surprise because it was one of the biggest concerns in terms of logistic and time constraints the study had.

From this study, several practical implications can be suggested. Not only can English monolingual speakers understand grammatical gender but assign a gender to words they previously believed were gender neutral; these classifications could be based off merely previous experiences and opinions gathered throughout their lives, rather than preconcepts of grammatical gender. In addition to this, it can also be inferred that English monolingual speakers hold certain sexist/genderist biases when associating words to gender or vice versa.

However, the limitations of this study must also be acknowledged. The reliability of these findings might be impacted by the low sample size, as well as the lack of different generational cohorts, and racial diversity among participants. The absence of generalizability might be attributable to the generally disparate and almost exclusive participation the study had, where most participants were young White women. It is also beyond the scope of the study to be certain of the implications the study might have. It is only safe to assume and contribute to the lack of literature.

Before this study, there were not many extensive research investigations on how English monolingual speakers perceived gender assignment to common nouns or if English exhibited sexist/genderist tendencies while doing so. Even though this study was successful, further research is needed to be stablished. Future studies should consider the possibility of confounding variables that might affect with the study's procedures. For example, since the study was online, it was impossible to know if some participants lied about their age, or their ability to speak other languages beside English. In addition to this, a lot of data could not be considered for the statical analysis because some participants did not fully complete the survey.

A recommendation for researchers interested in this field of study is to focus on the practicality, and the possible confounding factors that might interfere with the study. A larger sample size with a more diverse set of participants might help with more generalizable results that can help the field. A replication of the study designed by Lew-Williams and Fernald (2007), where sentence interpretation was tested could be put into practice, but adapted to grown English monolingual, rather than Hispanic newborns.

References

Audring, J. (2016, July). Gender. *Oxford research encyclopedia of linguistics*.

https://doi.org/10.1093/acrefore/9780199384655.013.43

Lew-Williams, C., & Fernald, A. (2007, March). Young children learning spanish make rapid use of grammatical gender in spoken word recognition. *Psychological Science. 18*(3), 193-198. https://doi.org/10.1111/j.1467-9280.2007.01871.x

De Lemus, S., & Estevan-Reina, L. (2021). La influencia del lenguaje sexista en la motivación y el sentimiento de ostracismo. *Revista de Psicologia Social*, *36*(1), 61-97. https://doi.org/10.1080/02134748.2020.1840230

Tougas, F., Brown, R., Beaton, A. M., & Joly, S. (1995). Neosexism: plus ça change, plus c'est pareil. *Personality and Social Psychology Bulletin, 21*(8), 842-849. https://doi.org/10.1177/0146167295218007

Wasserman, B. D., & Weseley, A. J. (2009). ¿Qué? Quoi? do languages with grammatical gender promote sexist attitudes? *Sex Roles*, *61*(9-10), 634-643. https://doi.org/10.1007/s11199-009-9696-3

Appendix A

Qualtrics Survey

Interpretation of Grammatical Gender Among English Monolingual Speakers

You are being asked to participate in a survey conducted by Diego De Gregorio and faculty supervisor, Michiko Nohara-LeClair at Lindenwood University. We are doing this study to find how English speakers assign grammatical genders to nouns by asking the participants to assign a gender, (either masculine or feminine) to nouns. Participants will be given 10 seconds to assign a gender to each noun, for a total of 10 nouns. It will take about 3 minutes to complete this survey. Your participation is voluntary. You may choose not to participate or withdraw at any time by simply not completing the survey or closing the browser window.

There is a chance you may feel slight frustration due to the novelty of the task. If you feel uncomfortable, you may withdraw without any penalties. We will not collect any information that may identify you. This study will benefit you by giving you the opportunity to learn about grammatical gender which is something that is absent from the English language.

If you are in the LPP you will receive two extra credit points in the course for which you signed up for the LPP. You will receive extra credits simply for completing this information sheet. You are free to withdraw your participation at any time without penalty. Participants who are not part of the LPP will receive no compensation beyond the possible benefits listed above. However, your participation is an opportunity to contribute to psychological science.

WHO CAN I CONTACT WITH QUESTIONS?

If you have concerns or complaints about this project, please use the following contact information:

Diego De Gregorio, dd246@lindenwood.edu

Michiko Nohara-LeClair, mnohara-leclair@lindenwood.edu

If you have questions about your rights as a participant or concerns about the project and wish to talk to someone outside the research team, you can contact Michael Leary (Director - Institutional Review Board) at 636-949-4730 or mleary@lindenwood.edu

By clicking the link below, I confirm that I have read this form and decided that I will participate in the project described above. I understand the purpose of the study, what I will be required to do, and the risks involved. I understand that I can discontinue participation at any time by closing the survey browser. My consent also indicates that I am at least 18 years of age.   You can withdraw from this study at any time by simply closing the browser window. Please feel free to print a copy of this information sheet.

I have read, understood, and printed a copy of, the above consent form and desire of my own free will to participate in this study

○ I agree

○ I do not agree

Are you at least 18 years old?

○ Yes

○ No

How old are you?

_____

Do you speak any other language besides English?

○ Yes

○ No
What is your gender?

○ Male

○ Female

○ Non-Binary

Choose one or more races that you consider yourself to be:

☐   White

☐   Black or African American

☐   American Indian or Alaska Native

☐   Asian

☐   Native Hawaiian or Pacific Islander

☐   Other _____

Instructions

This survey will ask you to assign a gender to common nouns such as tree, house, etc. There will be two options for you to
select: masculine or feminine, choosing the perceived gender for each noun.

 You will only have 10 seconds to select each response. There is no right or wrong answer in this survey, so go with your instinct! - Good luck and thank you for participating!

Did you thoroughly revise the survey's instructions?

○ Yes

○ No

Grass

Masculine   **Feminine**

Shovel

Masculine   **Feminine**

Tent

Masculine   **Feminine**

Mirror

Masculine   **Feminine**

Air

Masculine   Feminine

Helmet

Masculine   Feminine

Ambulance

Masculine   Feminine

Lamp

Masculine   Feminine

Cellphone

Masculine   Feminine

Boomerang

Masculine   **Femini**

Thank you for being part of my research project, I am very glad you took the time to fill out my survey!

Study's Purpose/Rationale

The purpose of this study was to see how English Speakers understand the concept of grammatical gender and if there is an inherent bias towards assigning the masculine gender to nouns. This study was exploratory and there were no wrong answers from participants.

According to the *Oxford Research Encyclopedia***, grammatical gender can be understood as a simple way to classify nouns and said gender systems may vary between languages. For example, "the ball" is la pelota (female) in Spanish and le ballon (male) in French.**

In the English language there is no grammatical gender.

If you have concerns or complaints about this project, please use the following contact information:
Diego De Gregorio, dd246@lindenwood.edu
Michiko Nohara-LeClair, mnohara-leclair@lindenwood.edu

Appendix B

Qualtrics Survey Version 1 (Feminine Before Masculine Version)

Helmet

Feminine   Masculine

Ambulance

Feminine   Masculine

Lamp

Feminine   Masculine

Cellphone

Feminine   Masculine

Boomerang

Feminine   Masculine

Appendix C

Qualtrics Survey Version 2 (Masculine Before Feminine Version)

Grass

Masculine   Feminine

Shovel

Masculine   Feminine

Tent

Masculine   Feminine

Mirror

Masculine   Feminine

Air

Masculine   Feminine

Appendix D

Interpretation of the Masculine Grammatical Gender in Common English Nouns

Word	Percieved as Masculine	Percentage
Grass	62	54.9%
Shovel	104	92%
Tent	86	76%
Mirror	9	8%
Air	32	28.3%
Helmet	101	89.4%
Ambulance	75	66.4%
Lamp	24	21.2%
Cellphone	70	62%
Boomerang	94	83.2%