Gender assignment in Basque/Spanish mixed Determiner Phrases: a study of simultaneous bilinguals.

Lucia Badiola and Ariane Sande

University of Illinois at Chicago
Abstract

This study examines the gender assignment strategies used in Gernika Basque (Basque Country, Spain) in Basque/Spanish mixed Determiner Phrases. Twenty-one simultaneous Basque/Spanish bilinguals completed a survey that comprised an Acceptability Judgment Task of code-switched sentences that they rated on a 1-7 Likert scale, a Forced-choice task, a Basque and a Spanish proficiency test, and a linguistic background questionnaire. Results from two Linear Mixed Models revealed that participants use two gender assignment strategies. In general, the bilinguals from Gernika that we studied preferred to assign the Spanish masculine determiner, *el*, to most Basque nouns. However, there is an exception when the Basque noun ends in lexical *a*. In these cases, they preferred to assign the Spanish feminine determiner, *la*, potentially as a result of homophony with the canonical ending for Spanish feminine nouns, also *a*. Additionally, they strongly dispreferred “double determiner constructions” (i.e. mixed DPs with both the Basque and the Spanish determiner). The gender assignment strategies used by simultaneous bilinguals from the Gernika region align with those used by English/Spanish simultaneous bilinguals, as reported in Liceras et al. (2008).

However, our results contrast with what Parafita-Couto et al. (2015) found for the same language pair; we discuss these differences and explore a possible explanation for them in our discussion section.

*Keywords:* code-switching, gender assignment, mixed DPs, Basque/Spanish simultaneous bilinguals.
Gender assignment in Basque/Spanish mixed Determiner Phrases: a study of simultaneous bilinguals

The present study examines gender assignment in Basque/Spanish mixed Determiner Phrases (DPs). The interest of these mixed constructions lies in that, whereas Spanish is a gendered language, Basque lacks grammatical gender altogether. Research on mixed DPs for this particular language pair is scarce. The same phenomenon has been extensively studied in other language pairs such as English/Spanish (Poplack, Pousada and Sankoff, 1982; Otheguy and Lapidus, 2003; Liceras, Fernández Fuentes, Perales, Pérez-Tanttam and Spradlin, 2008), German/Italian (Müller and Cantone, 2008; Eichler, Jansen and Müller, 2013) and French/German, Spanish/German and Italian/French (Eichler, Jansen and Müller, 2013). The language pair that we are interested in is Basque/Spanish. This language pair is similar to English/Spanish in that one of the languages has grammatical gender and the other one does not.

Even though factors such as animacy, phonological shape or analogical gender have been found to play a role in the gender assignment strategies of the gendered determiner in English/Spanish mixed DPs (see Poplack et al., 1982; Jake, Myers-Scotton & Gross, 2002; Liceras et al. 2008), researchers have claimed that English/Spanish bilinguals\(^1\) use the default strategy of assigning the default gender to the determiner. In Spanish, the default determiner happens to be the masculine form, *el* (i.e “the-masc.”), (see Roca (1989, 2005) and Harris (1991)) as in “*el table*”-“the.masc table” or “*el chair*”-“the.masc chair”. However, Liceras et al. (2008) found that this strategy was characteristic of simultaneous bilinguals. In fact, they concluded that L1 Spanish/L2 English speakers preferred the analogue gender strategy, which

---

\(^1\) When using the term “bilingual”, we are referring to individuals that learn both languages from an early age, i.e. simultaneous bilinguals.
consists of assigning a Spanish determiner to the English noun based on the grammatical gender of said noun in Spanish.

The only experimental study that has examined Basque/Spanish mixed DPs to date is Parafita-Couto, Munarriz, Epelde, Deuchar and Oyharçabal (2015). However, we are aware of the existence of other non-experimental studies, such as Ezeizabarrena (2009, in Grinstead, ed.) who carried out a longitudinal study in which she investigated the production of both Basque and Spanish by one early bilingual male child.

Contrary to what was found for English/Spanish, Parafita-Couto et al. (2015) observed that, in general, their L1 Spanish/L2 Basque participants preferred the Spanish feminine determiner, *la* (i.e. “the-fem.”), as in “*la* tipula”-”the.fem onion” or “*la* sagar”-”the.fem apple” regardless of the gender of the analogue noun. Parafita-Couto et al. (2015) propose that this preference for the feminine determiner could be influenced by a phonological shape strategy caused by “double determiner constructions”\(^2\). These “double determiner constructions” feature the Spanish gendered determiner (i.e. *el* or *la*) as well as the Basque determiner “-*a*”, which is suffixed to the noun (e.g. *la geltokia* “the station”). Thus, the authors claim that these bilinguals might have reinterpreted the postnominal Basque determiner as part of the lexical root and, since this determiner happens to be homophonous with the Spanish canonical ending for feminine nouns, also *a*, the participants are more likely to show a preference for the feminine determiner.

Given the little experimental research that has been done for gender assignment in Basque/Spanish mixed DPs, the purpose of our study is to contribute to the discussion by analyzing the gender assignment strategies used by Basque/Spanish simultaneous bilinguals

\(^{2}\) From here onwards, we will use quotation marks when referring to double determiner constructions as it is unclear whether Parafita et al.’s (2015) participants store final lexical *a* as part of the lexical entry or whether they are aware that they are using two determiners.
in mixed DPs. In doing so, we would like to see if our results pattern with what the literature has found or whether our experiment yields different outcomes.

Our results show that, on the one hand, Basque/Spanish simultaneous bilinguals from the Gernika region prefer the masculine Spanish determiner in mixed constructions with nouns that do not contain lexical a, as in “el liburu”-“the.masc book” or “el batzar”-“the.fem meeting”. On the other hand, they prefer the Spanish feminine determiner in mixed constructions with nouns that do contain lexical a, as in “la gona”-“the.fem skirt” or “la azterketa”-“the.fem exam”. This lexical a is etymological, it is part of the root and it is not the Basque determiner, the noun just happens to end in this particular vowel. Finally, they do not favor “double determiner constructions”.

These results contrast with what Parafita-Couto et al. (2015) found (i.e. the only study that has experimentally studied gender assignment strategies in Basque/Spanish mixed DPs); L1 Spanish/L2 Basque early bilinguals preferred mixed DPs where the Spanish feminine determiner accompanied the Basque genderless noun. They also found that their participants favored “double determiner constructions”. Nevertheless, the gender assignment strategies used by our bilinguals from the Gernika region align with those used by English/Spanish simultaneous bilinguals, as reported in Liceras et al. (2008) or Otheuy and Lapidus (2003).

This paper is organized as follows: the Background section briefly addresses how grammatical gender is realized in Spanish and Basque, and also includes a relevant discussion of gender assignment strategies in English/Spanish and in Basque/Spanish mixed DPs. Moreover, this section introduces our research questions. Afterwards, the methods of our study are laid out. Subsequently, we present the results of our study, which are then discussed with respect to our research questions and compared to what other studies have found. The final section of this paper presents our future steps, the limitations of the project and also concludes this paper.
2. Background

Before we move on to consider the gender assignment strategies used by bilinguals in mixed DPs, we will briefly address how grammatical gender is realized in both Spanish and Basque.

2.1 Gender in Spanish

In Spanish nouns are either masculine or feminine [+/- FEM], and this is an inherent property of Spanish nouns.

Barring the exceptions, masculine nouns in Spanish usually end in -o and feminine nouns usually end in -a (see (1a,b)). It will be important to keep these canonical endings in mind for the potential cross-linguistic effects that they may trigger in Basque/Spanish mixed DPs.

(1)  
a. El libro  
the.ART.MASC book.N.MASC  
b. La casa  
the.ART.FEM house.N.FEM

Finally, it is important to note that the masculine form is the default gender in Spanish (see Roca (1989, 2005) and Harris (1991)).

2.2 Gender in Basque

Basque has no grammatical gender. Nevertheless, Trask (2003) notes that because of its contact with Spanish, some words in western varieties of Basque have “imported Romance-style sex-marking (-o for masculine and -a for feminine)”. This is the case of the Basque word gixajo “poor fellow”, which appears with its female variant, gixaja. Parafita-Couto et al. (2015) argue that sex-marking is also present in lexical adjectives that have been borrowed from Spanish (e.g. majo/maja, “nice”, tonto/tonta, “foolish” or katoliko/katolika, “Catholic”). However, it is worth mentioning that all of these words that present sex-marking are, in fact, borrowings from Spanish. They will not be included in our study as we will exclusively focus on nouns.
A crucial distinction between Basque and Spanish is that, in Basque, there do not exist specific vowel or consonant endings for inanimate nouns (e.g. idazlan, “essay”, aterki “umbrella”, garagar “barley”, aditz, “verb”, or ate “door”). However, many of them do end in a vowel, and a subset of those, end in a (e.g. zarata, “noise”, gona, “skirt” or tipula, “onion”). Interestingly, lexical a is homophonous with the Basque determiner, also -a, which is suffixed to the end of the noun. Thus, liburu, “book”, a Basque noun with no lexical a would yield liburua “the book” when used with the determiner (see (2a)). Nouns with lexical a, such as zarata, “noise”, do not alter their shape when used with the determiner, as in (2b).

(2)  

a. liburu-a  
noun: book det: the  
liburua  
book.the  
‘the book’  

b. zarata-a  
noun: noise det: the  
zarata  
noise.the  
‘the noise’  

It is very important to bear in mind that the Basque determiner, -a, is, in turn, also homophonous with the canonical suffix for feminine Spanish nouns, also -a. This homophony could play a role in code-switching if there happened to be cross-linguistic effects.

2.3 Gender in mixed DPs  

Research on Basque/Spanish mixed DPs is scarce. Conversely, mixed DPs in other language pairs in which one of the languages has a grammatical gender system and the other one does not have been more extensively analyzed. This is the case of English/Spanish mixed DPs. In this subsection, we include a summary of the findings regarding English/Spanish mixed DPs. In the next subsection, we report on the findings from Parafita-Couto et al. (2015) with respect to Basque/Spanish mixed DPs.
Several factors have been found to influence gender assignment strategies in English/Spanish mixed DPs. Poplack, Pousada and Sankoff (1982, in Parafita-Couto et al. (2015)) found that animacy played a role; animate English nouns took gender according to sex. Phonological shape, as well as analogical gender, have also been found to be relevant when assigning a gendered determiner to a noun with no gender (see Poplack, Pousada and Sankoff, 1982 and Jake, Myers-Scotton and Gross, 2002 in Parafita-Couto et al. (2015)). In the case of Jake, Myers-Scotton and Gross (2002), analogical gender was found to be the most important factor in the mixed DPs that they analyzed and that were taken from a corpus of Latin American speakers of Spanish (n=151); it accounted for 36% of the mixed constructions, whereas phonological shape accounted for 23%. Nevertheless, they also concluded that 25% of the nouns in the corpus could not be explained in terms of analogical gender or phonological shape, hence concluding that masculine is the default in English/Spanish mixed DPs when the other two strategies (i.e. analogical gender and phonological shape) failed. Likewise, Otheguy and Lapidus (2003) proposed that masculine is the only productive gender in these mixed DPs, as long as the terminal node is not -a. In this particular case, they preferred the feminine determiner. Finally, Liceras et al. (2008) concluded that simultaneous bilinguals preferred the masculine default gender. Additionally, they also noticed that bilinguals make use of different strategies depending on the type of bilingual that they are. L1 Spanish learners of English preferred mixed DPs where the determiner had the gender of the translation equivalent of the noun. L1 English speakers, like simultaneous bilinguals, preferred mixed DPs where the masculine determiner is used as the default.

In sum, different gender assignment strategies have been reported in the literature of English/Spanish mixed DPs. These strategies vary depending on the type of bilingual.

---

3 Analogical gender refers to the gender of the equivalent noun in the other language.
However, the literature suggests that simultaneous bilinguals have a preference for the masculine default gender.

### 2.4 Gender in Basque/Spanish mixed DPs

Parafita-Couto et al. (2015) is the first article to experimentally explore gender assignment strategies in Basque/Spanish mixed DPs. Their study consisted of three experimental tasks: (1) naturalistic data (i.e. spontaneous observation) carried out by Deuchar et al. (2010), (2) an elicitation task (i.e. director-matcher task) and (3) an auditory Acceptability Judgment Task (AJT). In the first task, participants were “adult highly proficient bilinguals (L1 Basque, L2 Spanish)”. In the case of the remaining two tasks, data was collected from L1 speakers of Spanish “who acquired Basque either as an L2 ($n=22$) or simultaneously ($n=4$)” and who were living in Pamplona (Spain).

First, naturalistic data yielded 92 samples of mixed Basque/Spanish DPs. Here, they found that mixed DPs with a feminine determiner were produced more frequently (78.3%). The Spanish feminine determiner appeared with both feminine and masculine translation equivalents (e.g. *la piperra*, “el pimiento”-“the pepper” and *la pitxia*, “la joya”-“the jewel”), whereas the Spanish masculine determiner was used mostly with masculine translation equivalents. In light of these findings, Deuchar et al. (2010) concluded that a reinterpretation of the Basque determiner *-a* as a feminine gender marker might be taking place due to its homophony with the canonical ending of feminine nouns in Spanish, *a*. Second, the director-matcher task did not yield enough data for analysis or conclusions. Third, the auditory AJT included four different Basque nouns, two with a Spanish masculine translation equivalent (e.g. *ilar*, “el guisante”-”the pea” without lexical *a*, and *makila*, “el bastón”-”the walking stick” with lexical *a*) and two with a feminine translation equivalent (i.e. *sagar*, “la manzana”-”the apple” without lexical *a* and *tipula*, “la cebolla”-”the onion” with lexical *a*). In this final task, the authors concluded that both analogical gender and phonological shape...
“are relevant factors for gender assignment”. Additionally, they found higher acceptance rates when the Spanish determiner matched both analogical gender in Spanish and the phonological ending of the Basque noun.

Overall, they found a preference for the feminine Spanish determiner, “even where there was a mismatch of phonological ending and analogical gender (...) but it was preferred with nouns with a feminine translation equivalent (...) the masculine determiner was dispreferred with Basque nouns that have a feminine translation equivalent”. The authors offer support to Deuchar et al.’s (2010) hypothesis that these speakers may have reinterpreted the Basque determiner -a as a feminine gender marker due to the abovementioned homophony. In other words, “the determiner might be stored as part of the lexical entry, and, thus, it might have lost its value as a definite determiner”.

For Parafita-Couto et al. (2015), “these results suggest that feminine is the unmarked gender and as a consequence has default status in Spanish-Basque mixed nominal constructions rather than the expected masculine gender, at least for the Spanish-Basque adult bilinguals under study”. Hence, they conclude that Basque/Spanish adult bilinguals use resources for gender assignment that are different from those used by English/Spanish bilinguals.

In light of the previous discussion, our research questions are as follows:

RQ1: For Basque nouns that do not contain lexical a:

(1a) Does this Basque/Spanish bilingual group show a preference for the masculine or the feminine Spanish determiner in mixed DPs?

Hypothesis 1a: Following Parafita-Couto et al. (2015), our participants should show a preference for the Spanish feminine determiner. Nevertheless, Liceras et al. (2008) found that different types of bilinguals use different gender assignment strategies. Hence, due to the fact that we are dealing with a different bilingual group from that in Parafita-Couto et al.’s
(2015) study, we might find that the gender assignment strategies that our bilinguals use are also different. That being said, if we assume that Basque/Spanish simultaneous bilinguals behave as English/Spanish simultaneous bilinguals, we expect our participants to show a preference for the Spanish masculine determiner, the default (see Liceras et al. 2008).

**Hypothesis 1b:** Is this preference regulated by the analogical gender?

**Hypothesis 1b:** This preference should not be regulated by the analogical gender.

**Hypothesis 1c:** Does this Basque/Spanish bilingual group show a preference for a single or a double determiner in mixed DPs?

**Hypothesis 1c:** If we follow Parafita-Couto et al. (2015), we expect our participants to favor “double determiner constructions”. However, as aforementioned, since we are dealing with a different bilingual group, we might encounter differences with respect to the preference for “double determiner constructions”.

**Hypothesis 1d:** Is this preference regulated by the gender of the determiner and/or the gender of the equivalent noun?

**Hypothesis 1d:** This preference should not be regulated by the gender of the determiner and/or the gender of the equivalent noun.

**RQ2:** For Basque nouns that contain lexical a:

(2a) Does this Basque/Spanish bilingual group show a preference for the masculine or the feminine determiner in mixed DPs?

**Hypothesis 2a:** Following Parafita-Couto et al.’s (2015) findings, we expect our bilinguals to show an overall preference for the Spanish feminine determiner. Once again, Liceras et al. (2008) found that different types of bilinguals used different gender assignment strategies. Hence, due to the fact that we are dealing with a different bilingual group from that in Parafita-Couto et al.’s (2015) study, we might find that the gender assignment strategies that our bilinguals use are also different.
(2b): Is this preference regulated by the analogical gender?

**Hypothesis 2b:** This preference should not be regulated by the analogical gender.

3. Methods

3.1 Participants

Twenty-one early Basque/Spanish bilinguals took part in the study, 2 men and 19 women. All participants were born and raised in Gernika, a town that is located in the region of Busturialdea, in the Northwestern part of the Basque Country. We chose this community because both Basque and Spanish are very present in everyday life, and virtually everyone under the age of 35 is bilingual. This community does not speak the standard variety of Basque (Euskara Batua, “United Basque”) but a sub-dialect of the Bizkaian variety, and they are used to code-switching in their daily lives. In fact, Etxebarria (1998, 2004 in Lantto, 2015) notes that in the bilingual community of Busturialdea, code-switching can be found in both intra-sentential and extra-sentential positions.

One particularity of the dialect of Basque spoken in Gernika is that, in the case of nouns that end in lexical \( a \), there is no homophony between the bare noun and the noun with the suffixed determiner (i.e. \( -a \)). In this dialect, the determiner experiences phonological changes when it is attached to the noun. Let us turn our attention to the examples presented in (3).

(3)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>liburu-a</td>
<td>noun: book det: the</td>
</tr>
<tr>
<td></td>
<td>liburu</td>
<td>‘the book’</td>
</tr>
<tr>
<td>b</td>
<td>zarata-a</td>
<td>noun: noise det: the</td>
</tr>
<tr>
<td></td>
<td>zarata</td>
<td>‘the noise’</td>
</tr>
</tbody>
</table>

When the determiner \( -a \) is suffixed to the noun *liburu*, it is pronounced as [e] instead of [a], (i.e. *liburu*[e]). In the case of *zarata*, when the determiner is suffixed, the pronunciation becomes the diphthong [ie] instead of [a] (i.e. *zarat*[ie]). Therefore, there is a
difference in pronunciation between the bare noun and the combination of the noun and the determiner. As such, in these cases, the Basque determiner –a is no longer homophonous with the canonical Spanish ending for feminine nouns, a, or the Basque nouns that end in lexical a.

The average age of the participants was 26.3 years and the age range was 22-28. Fourteen of the participants reported to have learned both languages from birth. The rest reported to have acquired both before the age of 3. Their schooling was exclusively in Basque, except for the Spanish language class and the foreign language classes. With regards to their educational level, twenty of them were college graduates, some of them with graduate degrees, and one participant reported to have completed vocational training.

As a preliminary measure of proficiency, the participants were asked to self-rate their overall ability in both Spanish and Basque on a 1-5 scale, 1 being “poor” and 5 being “native speaker command”. Furthermore, they were asked to rate their Spanish and Basque reading, writing, speaking and understanding skills individually, also on a scale of 1-5. Their average proficiency scores are shown in Table 1.
Table 1

Average proficiency for overall and individual skills for Basque and Spanish based on self-reports

<table>
<thead>
<tr>
<th></th>
<th>Basque</th>
<th>Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>4.86</td>
<td>4.57</td>
</tr>
<tr>
<td>Writing</td>
<td>4.33</td>
<td>4.52</td>
</tr>
<tr>
<td>Understanding</td>
<td>4.81</td>
<td>4.76</td>
</tr>
<tr>
<td>Speaking</td>
<td>4.71</td>
<td>4.76</td>
</tr>
<tr>
<td>Overall</td>
<td>4.71</td>
<td>4.71</td>
</tr>
</tbody>
</table>

As an additional measure of proficiency, our participants completed a Basque and a Spanish proficiency test. First, the Basque proficiency test consisted of 23 multiple-choice questions that were very similar to the *Atariko Froga* (“Preliminary test”) of the EGA exam (*Euskararen Gaitasun Agiria*, “Basque Language Competence Certificate”), the standard proficiency measure of Basque. All of the participants scored above 20. Second, they completed an adapted version of the *DELE*, a standard Spanish proficiency test that consists of 50 questions. All of the participants scored above 46.

Moreover, they all reported to speak both Basque and Spanish with their group of friends (“*kuadrilla*”). At home, 14 of the participants stated that they speak both languages, 2 of them reported to speak only Basque, and 5 of them only Spanish. Finally, most of them reported to have positive attitudes towards mixing both languages (see Badiola, Delgado,

---

4 The concept of “*kuadrilla*” refers to a very close-knit group of friends that grew up together, that have a strong bond and that share a sense of unity, togetherness and belonging that is maintained throughout their lifetimes.
Sande and Stefanich, 2017). Nevertheless, some of them expressed that it is not something that they particularly like but that they understand that it is a natural phenomenon and that it comes with living in a bilingual community.

3.2 Experimental stimuli

Our Basque/Spanish mixed DPs consisted of a Spanish determiner (i.e. both masculine and feminine) and a Basque noun. We also included Basque nouns with and without lexical a. However, included a greater quantity of nouns; 10 nouns with lexical a, five with a Spanish masculine analogue and five with a Spanish feminine analogue, and 10 nouns without lexical a, also five with a Spanish masculine analogue and five with a Spanish feminine analogue.

This gave rise to a total of 20 nouns (see Table 2).

Table 2

<table>
<thead>
<tr>
<th>Analogue gender in Spanish</th>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No lexical a</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>liburu</td>
<td>libro, “book”</td>
<td>batzar, reunión, “meeting”</td>
</tr>
<tr>
<td>zorroskilo</td>
<td>sacapuntas, “pencil sharpener”</td>
<td>atzingi, goma de borrar, “eraser”</td>
</tr>
<tr>
<td>lan</td>
<td>trabajo, “class project”</td>
<td>bikote, pareja, “couple”</td>
</tr>
<tr>
<td>jantoki</td>
<td>comedor, “school cafeteria”</td>
<td>geltoki, estación, “train/bus station”</td>
</tr>
<tr>
<td>jolastoki</td>
<td>patio, “recess”</td>
<td>aurkezpen, presentación, “presentation”</td>
</tr>
<tr>
<td><strong>With</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>makila</td>
<td>bastón, “cane, walking stick”</td>
<td>gona, falda, “skirt”</td>
</tr>
<tr>
<td>arbola</td>
<td>árbol, “tree”</td>
<td>sarrera, entrada, “ticket”</td>
</tr>
<tr>
<td>azterketa</td>
<td></td>
<td>armiarma</td>
</tr>
</tbody>
</table>
The 20 different nouns that we employed are all very common nouns used in everyday life, especially in a classroom context, as confirmed by our Basque/Spanish bilingual consultant. We avoided using nouns that could be translated into Spanish in more than one way, especially if those translations had different genders (e.g. idazlan, “essay”, can be translated as both the feminine noun (la) composición or the masculine noun (el) ensayo). Finally, we also avoided using cognates, with the exception of the cognate arbola, “tree”. Each of the 20 nouns was presented with both a masculine and a feminine determiner (see Tables 3 and 4), giving rise to a total of 40 mixed DPs. Additionally, as “double determiner constructions” have been reported in the literature (Parafita-Couto et al. 2015), we included constructions of this type as well, see (4).

---

5 The noun ariketa can be translated into both “el ejercicio” or “la actividad” - “class exercise”. However, the feminine translation is not widely used in this community. In order to test this, we asked several members of the community to provide us with the translation of ariketa and they all reported that it was the masculine noun “ejercicio”.

6 We are aware that batzar could also be a cognate of the Spanish noun bazar “bazaar, open air market”. However, in this community the Spanish noun bazar is used to denote a specific type of store, similar to a dollar shop, and does not have the connotation of “meeting” or “open air market”.

---

**lexical a**  
*examen, “exam”*  
*ariketa*  
*ejercicio “exercise, activity”*  
*zarata*  
*ruido, “noise”*  
*araña, “spider”*  
*kipula*  
*cebolla, “onion”*  
*aukera*  
*oportunidad, “opportunity”*
(4) La piperr-a  
D. FEM pepper-DET.Basque  
Spanish equivalent (pimiento) masculine "the pepper"  

(Parafita-Couto et al. 2015)

For nouns with no lexical *a*, we included a condition that doubled the determiner. In total, there were 12 different conditions (see Table 3).

Table 3

*Possible mixed DP combinations for Basque Nouns with no lexical *a* for the examples "liburu"-"book" and "batzar"-"meeting"*

<table>
<thead>
<tr>
<th>Masculine analogue in Spanish</th>
<th>Feminine analogue in Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine D</td>
<td>Feminine D</td>
</tr>
<tr>
<td>No lexical <em>a</em></td>
<td>el liburu</td>
</tr>
<tr>
<td>With <em>a</em></td>
<td>el liburua</td>
</tr>
</tbody>
</table>

Table 4

*Possible mixed DP combinations for Basque Nouns with lexical *a* for the examples "zarata"-"noise" and "gona"-"skirt"*

<table>
<thead>
<tr>
<th>Masculine analogue in Spanish</th>
<th>Feminine analogue in Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine D</td>
<td>Feminine D</td>
</tr>
<tr>
<td>With lexical-<em>a</em></td>
<td>el zarata</td>
</tr>
</tbody>
</table>
Finally, as abovementioned, our 10 original nouns (see Table 2) were used in both of the experimental tasks of our study: the Acceptability Judgment Task (AJT) and the Forced-choice task, albeit in a different manner. We will address this issue in the two subsections that follow.

3.2.1 Acceptability Judgment Task

In this first task, each possible mixed DP combination had a unique carrier phrase assigned to it. Table 2 shows that some Basque nouns appeared without lexical a or with the Basque determiner suffixed to the noun (i.e. liburu, “book” and liburua, “the book”), and this yielded four possible mixed DP combinations. Each combination was embedded in a different carrier phrase, thus yielding a total of four carrier phrases per noun. In contrast, Table 3 shows that a subset of Basque nouns that contain lexical a, even before the Basque determiner is suffixed (i.e. azterketa, “exam” but also, azterketa, “the exam”), this yielded two possible mixed DP combinations. Each combination was embedded in a different carrier phrase, thus yielding a total of two carrier phrases per noun.

Each carrier phrase was designed by our Basque/Spanish bilingual consultant so that the resulting stimuli sounded as natural as possible to our participants. All carrier phrases were entirely in Spanish with the exception of the Basque noun within the DP. Additionally, as abovementioned, none of the carrier phrases contained an adjective as our goal was to limit our focus to the gender agreement of the determiner, and, thus, we wanted to avoid any potential interferences from another variable. Moreover, the same amount of critical stimuli and distractors was used, and all items were randomized and shown to the participants in blocks of 10. None of the blocks contained the same noun, and the Spanish determiner with which each Basque noun was introduced first was also randomized; that is, they never saw always the feminine Spanish determiner first or always the masculine Spanish determiner first. Example stimuli are shown in (5)-(6):
Finally, the AJT was presented to our participants in a written form. We are aware that CS is primarily an oral phenomenon. Nevertheless, we must note that Koronkiewicz and Ebert (submitted) conclude that the modality of presentation of code-switched sentences in AJTs did not have an effect on participants’ ratings.

3.2.2 Forced-choice Task

For our second task, we selected a subset of the nouns that were previously used in the AJT. Two of them had a Spanish masculine analogue (e.g. zorro skilo, “pencil sharpener” and jolastoki, “recess”) and the other two nouns had a Spanish feminine analogue (e.g. atzingi, “eraser” and aurkezpen, “presentation”). None of the nouns that we used in this second task had lexical a, as our main goal here was to explore the participants’ preferences with respect to having only the Spanish determiner or a “double determiner construction”. We believed that the AJT would show us their preferences with respect to having a masculine or a feminine determiner, but could also give us mixed results regarding their choice between a single or a “double determiner construction”. In other words, a participant could give a high rating to el batzar “the meeting”, and reject la batzar, but also accept el/la batzarra. Therefore, we wanted to see their preference when el batzar and el/la batzarra were put back to back. We believed that this task would help us elucidate this matter.

Finally, for each of the nouns, we randomly selected only one of the carrier phrases from the AJT per noun. Example stimuli are shown in Table 5.
All possible combinations for the noun atzingi, “eraser”, in the carrier phrase “Can I borrow the eraser?”

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>No</td>
<td>¿Me dejas el atzingi?</td>
<td>F</td>
<td>No</td>
<td>¿Me dejas la atzingi?</td>
</tr>
<tr>
<td>M</td>
<td>Yes</td>
<td>¿Me dejas el atzingia?</td>
<td>F</td>
<td>Yes</td>
<td>¿Me dejas la atzingia?</td>
</tr>
<tr>
<td>M</td>
<td>No</td>
<td>¿Me dejas el atzingi?</td>
<td>M</td>
<td>Yes</td>
<td>¿Me dejas el atzingia?</td>
</tr>
<tr>
<td>F</td>
<td>No</td>
<td>¿Me dejas la atzingi?</td>
<td>F</td>
<td>Yes</td>
<td>¿Me dejas la atzingia?</td>
</tr>
<tr>
<td>M</td>
<td>No</td>
<td>¿Me dejas el atzingi?</td>
<td>F</td>
<td>Yes</td>
<td>¿Me dejas el atzingia?</td>
</tr>
<tr>
<td>F</td>
<td>No</td>
<td>¿Me dejas la atzingi?</td>
<td>M</td>
<td>Yes</td>
<td>¿Me dejas el atzingia?</td>
</tr>
</tbody>
</table>

3.3 Procedure

The participants completed a survey in Qualtrics. Prior to the experiment, all participants signed an online consent form. The survey was divided in five blocks and all participants completed each block in the same order. First, participants completed the AJT of the Basque/Spanish CS in which they had to rate each of the items on a 1-7 Likert scale, 1 being ‘completely unacceptable’ and 7 being ‘completely acceptable’. All instructions were in both Basque and Spanish right from the onset in order to activate the participants’ bilingual mode, as recommended in González-Vilbazo et al. (2013).
Second, participants completed the Forced-choice task. In this task, participants saw sentences in sets of two. The instructions of this task were phrased as in Stadthagen-González, López, Parafita-Couto and Párraga (forthcoming); that is, participants were asked to pick the one closer to the way that they would speak to another bilingual person, even when both options sounded equally right or equally wrong. As previously mentioned, each Basque noun had 4 possible options that resulted from the alternations of the gender of the determiner and whether it appeared with or without lexical $a$. Therefore, there were 6 possible combinations for each noun. Participants saw all combinations for each noun back to back, but never in the same page. The 6 combinations were staggered for each noun.

Third, participants completed the Basque proficiency test, which, as aforementioned, was similar to the Atariko Froga (“Preliminary exam”) of the EGA exam (Euskararen Gaitasun Agiria, “Basque Language Competence Certificate”). Afterwards, participants completed a linguistic background questionnaire. This questionnaire included questions related to age, sex, their level and language of education, as well as their linguistic proficiency in both Spanish and English and questions related to their bilingual habits and language use. They were also asked about their attitudes towards code-switching (see Badiola, Delgado, Sande and Stefanich (2017) for discussion of how attitudes have an effect on participants’ ratings in AJTs). Finally, the Spanish DELE was completed by our participants on a different day.

3.4 Analysis

For the AJT, two Linear Mixed Models (LMM) were conducted, one for Basque nouns that do not contain lexical $a$, and a second one for those that do. The reason behind conducting two LMMs is that we could not mix all of the items as the two groups did not have the same amount of conditions: nouns with lexical $a$ only had two conditions (they appeared with a masculine and a feminine determiner) and nouns without lexical $a$ had four conditions.
(masculine and feminine determiner as well as their counterparts with “double determiner constructions”).

In the first LMM the dependent variable were the ratings provided by each participant in a 1-7 Likert scale. The independent variables were AnalogueG (whether the Spanish analogue was masculine or feminine), GenderDet (whether the mixed DP contained a masculine or a feminine Spanish determiner) and DoubleDet (whether the mixed DP only had the Spanish determiner or was in a “double determiner construction”). In the second LMM, the dependent variables were the same. However, there was one less independent variable: DoubleDet was removed as all nouns appeared solely with the Spanish determiner. As for the Forced-choice Task, we decided not to run any statistics with the participants’ answers as we did not have many tokens. This task was simply used as a commentary to the results of the AJT.

4. Results

4.1 Results of the AJT

Our first research question asked whether participants preferred the masculine or the feminine Spanish determiner when it was accompanying a Basque genderless noun that did not contain lexical a. In general, participants provided higher ratings when the noun appeared with a masculine determiner than when it appeared with a feminine determiner. This preference held true regardless of the gender of the Spanish analogue noun. Our first research question also asked whether this community showed a preference for a single determiner or a “double determiner construction”. In general, this community gave higher ratings to sentences with only the Spanish determiner.

Our second research question asked whether participants preferred the masculine or the feminine determiner with nouns that do contain lexical a. In these instances, participants gave higher ratings to mixed DPs with the Spanish feminine determiner, regardless of the
gender of the Spanish analogue noun. Table 6 shows the average rating provided by our participants for each of the 12 conditions.

Table 6

*Average rating for each condition*

<table>
<thead>
<tr>
<th></th>
<th>Masculine D</th>
<th>Feminine D</th>
<th>Masculine D + -a</th>
<th>Feminine D + -a</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feminine analogue no lexical a</strong></td>
<td>6.61 (SD=0.7)</td>
<td>2.58 (SD=0.9)</td>
<td>3.47 (SD=1.2)</td>
<td>2.34 (SD=1.8)</td>
</tr>
<tr>
<td><strong>Masculine analogue no lexical a</strong></td>
<td>6.03 (SD=0.4)</td>
<td>3.09 (SD=0.8)</td>
<td>3.72 (SD=0.8)</td>
<td>3.13 (SD=0.8)</td>
</tr>
<tr>
<td><strong>Feminine analogue lexical a</strong></td>
<td>2.81 (SD=1.3)</td>
<td>5.27 (SD=0.8)</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td><strong>Masculine analogue lexical a</strong></td>
<td>3.58 (SD=1.3)</td>
<td>5.66 (SD=1.2)</td>
<td>_______</td>
<td>_______</td>
</tr>
</tbody>
</table>

To answer our first research question, a Linear Mixed Model (LMM) was run in order to determine the effect of AnalogueG, GenderDet and DoubleDet. For the analysis, we included all the possible two and three way interactions with our three independent variables. Random intercepts were included at the Participant and Item levels in order to avoid individual variation, as well as any effects caused by a specific lexical item.

Significant main effects were found for GenderDet (F(1,20.00) = 85.09; p = .000) as well as for DoubleDet (F(1,20) = 58.07; p = .000). That is, participants gave statistically higher ratings to mixed DPs with a masculine determiner and statistically higher ratings to mixed DPs with only the Spanish determiner. No significant effects were found for
AnalogueG (F(1,8.1)=.248; p = .631), meaning that our participants did not behave differently when the Spanish analogue noun was masculine or feminine.

Considering our research questions, different interactions were analyzed. First of all, analysis of the pairwise comparisons for the AnalogueG*GenderDet interaction revealed that both when the Spanish analogue was feminine or masculine, our participants gave significantly higher ratings to nouns accompanied by masculine determiners.

Table 7

*Significance values from the AnalogueG*GenderDet pairwise comparison*

<table>
<thead>
<tr>
<th>AnalogueG</th>
<th>GenderDet</th>
<th>GenderDet</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Spanish Fem. analogue)</td>
<td>M</td>
<td>F</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>M</td>
<td>.000*</td>
</tr>
<tr>
<td>2 (Spanish Masc. analogue)</td>
<td>M</td>
<td>F</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>M</td>
<td>.000*</td>
</tr>
</tbody>
</table>

Furthermore, analysis of the AnalogueG*DoubleDet interaction revealed that our participants gave significantly higher ratings to mixed DPs with only the Spanish determiner.

Table 8

*Significance values from the AnalogueG*DoubleDet pairwise comparison*

<table>
<thead>
<tr>
<th>AnalogueG</th>
<th>Double Det</th>
<th>DoubleDet</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Spanish Fem. analogue)</td>
<td>Yes</td>
<td>No</td>
<td>.000*</td>
</tr>
</tbody>
</table>
Finally, analysis of the AnalogueG*GenderDet*DoubleDet interaction revealed that regardless of AnalogueG, when the Spanish determiner was feminine, there were no statistically significant differences between having a single determiner or a “double determiner construction”. Conversely, when the Spanish determiner was masculine, participants gave statistically higher ratings to mixed DPs with a single determiner.

Table 9

Significance values from the AnalogueG*GenderDet*DoubleDet pairwise comparison

<table>
<thead>
<tr>
<th>Analogue G</th>
<th>GenderDet</th>
<th>DoubleDet</th>
<th>DoubleDet</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Spanish Fem. analogue)</td>
<td>F</td>
<td>No</td>
<td>Yes</td>
<td>.973</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>.973</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>No</td>
<td>Yes</td>
<td>.000*</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>.000*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 (Spanish Masc. analogue)</td>
<td>F</td>
<td>No</td>
<td>Yes</td>
<td>.435</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>.435</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In order to answer our second research question, another Linear Mixed Model (LMM) was run in order to determine the effect of AnalogueG and GenderDet. For the analysis, the AnalogueG*GenderDet interaction was included in the model and pairwise comparisons for the interaction were planned. Also in this case, random intercepts were included at the Participant and Item levels.

Significant main effects were found for GenderDet (F(1,20.00) = 52.03; p = .000). Participants gave statistically higher ratings to mixed DPs with a feminine determiner. There were no effects for Group (F(1, 348) = 1.241; p = .329). Analysis of the AnalogueG*GenderDet pairwise interaction revealed that regardless of AnalogueG, participants gave statistically higher ratings to mixed DPs with a feminine determiner.

Table 10

*Significance values from AnalogueG*Gender interaction*

<table>
<thead>
<tr>
<th>AnalogueG</th>
<th>GenderDet</th>
<th>GenderDet</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Spanish Fem. analogue)</td>
<td>F</td>
<td>M</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>.000*</td>
</tr>
<tr>
<td>2 (Spanish Masc. analogue)</td>
<td>F</td>
<td>M</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>.000*</td>
</tr>
</tbody>
</table>
To sum up, for mixed DPs with Basque nouns that do not contain lexical *a*, participants showed a preference for the Spanish masculine determiner, regardless of the gender of the analogue Spanish noun. Additionally, they gave statistically higher ratings to mixed DPs with a single determiner. For mixed DPs with Basque nouns that contain lexical *a*, they gave statistically higher ratings to mixed DPs with the Spanish feminine determiner, also regardless of the gender of the analogue Spanish noun.

Our results yield clear answers to all of our research questions. There is an effect for GenderDet for nouns without lexical *a* and those with lexical *a*, and no effect for Group in both cases. There is also an effect for DoubleDet in the case of nouns that do not contain lexical *a*.

More specifically, our first research question investigates the gender assignment strategies used by bilingual participants in the case of Basque nouns that do not contain lexical *a*. Here, the results of the LMM show that our participants prefer the Spanish masculine determiner over the feminine. This preference holds regardless of the gender of the Spanish analogue noun, indicating that analogical gender is not a strategy used by this community, i.e. both “el *bikote*”-”the couple-fem.” and “el *zorroskilo*”-”the pencil sharpener-masc.” were given statistically higher ratings than their counterparts with feminine determiner, “*la bikote*” and “*la zorroskilo*”. Moreover, results show that participants gave statistically lower ratings to mixed DPs with “double determiner constructions”. All in all, in the case of Basque nouns without lexical *a*, both the results from the AJT and the Forced-choice Task indicate that participants favor the Spanish masculine determiner with only the Spanish determiner, i.e they preferred “el *batzar*”-”the meeting” over “el *batzarra*”, or “*la liburu*”-”the book” over “*la liburua*”.

Our second research question investigates the gender assignment strategies used by our participants in the case of Basque nouns that do contain lexical *a*. The results of the LMM
show that this bilingual community prefers the Spanish feminine determiner, and that this preference holds regardless of the gender of the Spanish analogue noun, again indicating that our participants do not resort to analogical gender when assigning the gendered Spanish determiner to the genderless Basque noun, i.e. they preferred “la gona”-”the skirt-fem.” over “el gona” or “la makila”-”the walking stick-masc.” over “el makila”.

It is worth mentioning that we are not claiming that Basque nouns contain gender nor that the Spanish gendered determiner that is assigned to the ungendered Basque noun is regulated by said noun. Our bilingual group uses the default strategy of assigning a gendered Spanish determiner to an ungendered Basque noun. For nouns that end in lexical *a*, the masculine default gender is replaced by the feminine, perhaps due to a phonological shape rule, as *-a* also happens to be the canonical ending for Spanish feminine nouns.

### 4.2 Results of the Forced-choice Task

Table 11 illustrates the preferences of this bilingual community in the form of percentages. The table collapses the results of both Basque nouns with Spanish masculine analogues and Spanish feminine analogues.

Table 11

*Average percentages of each choice by participants*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Double Det</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>No</td>
<td>98.82% (20.75/21)</td>
</tr>
<tr>
<td>2 M</td>
<td>Yes</td>
<td>89.05% (18.7/21)</td>
</tr>
<tr>
<td>3 M</td>
<td>No</td>
<td>97.62% (20.5/21)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Double Det</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>No</td>
<td>1.19% (0.25/21)</td>
</tr>
<tr>
<td>2 F</td>
<td>Yes</td>
<td>10.95% (2.3/21)</td>
</tr>
<tr>
<td>3 M</td>
<td>Yes</td>
<td>2.38% (0.5/21)</td>
</tr>
</tbody>
</table>
The results of the Forced-choice Task corroborate what we found in the AJT, and they also allow us to further elucidate this bilingual group’s gender assignment strategies. When presented with the choice, participants always preferred mixed DPs with a Spanish masculine determiner (see (1)-(2) and (5)-(6)), in both “double determiner constructions” and mixed DPs with only the Spanish determiner. Additionally, participants showed a preference for mixed DPs with only the Spanish determiner (see (1), (3) and (4)-(5)). Finally, it is worth mentioning that the only instance where the participants showed a preference for “double determiner constructions” was the sentence pair in (6), where the Spanish determiner is masculine. That is, participants are able to accept “double determiner constructions” with a masculine Spanish determiner but only over mixed DPs with only the feminine Spanish determiner.

## 5. Discussion

Our results are able to yield clear answers to all of our research questions suggesting that there is an effect for GenderDet for nouns without lexical a and those with lexical a, and no effect for Group in both cases. There is also an effect for DoubleDet in the case of nouns that do not contain lexical a.

More specifically, our first research question investigates the gender assignment strategies used by bilingual participants in the case of Basque nouns that do not contain lexical a. Here, the results of the LMM show that our participants prefer the Spanish
masculine determiner over the feminine. This preference holds regardless of the gender of the Spanish analogue noun, indicating that analogical gender is not a strategy used by this community, i.e. both “el bikote”-”the couple-fem.” and “el zorroskilo”-”the pencil sharpener-masc.” were given statistically higher ratings than their counterparts with feminine determiner, “la bikote” and “la zorroskilo”. Moreover, results show that participants gave statistically lower ratings to mixed DPs with “double determiner constructions”. If we combine both variables (gender assignment and “double determiner constructions”), both the results from the AJT and the Forced-choice Task indicate that participants favor the Spanish masculine determiner with only the Spanish determiner, i.e they prefer “el batzar”-”the meeting” over “el batzarra”, or “la liburu”-”the book” over “la liburua”.

Our second research question investigates the gender assignment strategies used by our participants in the case of Basque nouns that do contain lexical a. The results of the LMM show that this bilingual community prefers the Spanish feminine determiner, and that this preference holds regardless of the gender of the Spanish analogue noun, again indicating that our participants do not resort to analogical gender when assigning the gendered Spanish determiner to the genderless Basque noun, i.e. they prefer “la gona”-”the skirt-fem.” over “el gona” or “la makila”-”the walking stick-masc.” over “el makila”.

We are not claiming that Basque nouns contain gender or that the Spanish gendered determiner that is assigned to the ungendered Basque noun is regulated by the Basque noun. Our bilingual group uses the default strategy of assigning a gendered Spanish determiner to an ungendered Basque noun, and this gendered determiner happens to be the masculine default, el. In the case of Basque nouns that end in lexical a, the masculine default gender is replaced by the feminine, perhaps due to a phonological shape rule, as -a also happens to be the canonical ending for Spanish feminine nouns.
Therefore, our results reveal that our participants make use of two gender assignment strategies. A default strategy which surfaces as the masculine gendered determiner for nouns that do not contain lexical a, and a second strategy for the subset of Basque nouns that end in lexical a. This second strategy consists in assigning the feminine Spanish determiner to the Basque noun. Our findings contrast with what has been previously found in the literature of Basque/Spanish mixed DPs. As we mentioned in Section 2.4, Parafita-Couto et al. (2015) conclude that the default strategy for their participants is that of assigning the feminine Spanish determiner to the Basque noun. These differences could be due to two reasons: (1) because Parafita-Couto et al.’s participants genuinely prefer double determiner constructions while our bilinguals do not, and (2) because their participants and ours belong to two different bilingual profiles. We address each reason in turn.

First, the participants in Parafita-Couto et al.’s (2015) study awarded high ratings to mixed determiner phrases that contained “double determiner constructions”. For Basque nouns that do not end in lexical a, the authors propose that the Basque determiner that is suffixed to the end of the noun, also –a, might have been grammaticalized and it is now reinterpreted as part of the noun. Thus, for these bilinguals, these particular mixed DPs do not display determiner doubling in any way, whereas our bilinguals detect the “double determiner construction” immediately. We suggest that, for the bilingual speakers in Parafita et al.’s (2015) study, the subset of Basque nouns ending in a is no longer a subset, they represent the majority of Basque nouns. As a consequence, the phonological shape rule that overrides the default strategy of assigning the Spanish default determiner, el, to the Basque noun is applied to most nouns. This offers an explanation to why the Spanish feminine determiner is the default for the participants in Parafita-Couto et al. (2015).

Second, our findings might contrast with Parafita-Couto et al.’s (2015) because their participants and ours belong to different bilingual profiles. Parafita-Couto et al. (2015)
analyzed the gender assignment strategies used by L1 Spanish/L2 Basque early sequential bilinguals. According to them, these bilinguals acquired Spanish at home and started acquiring Basque at school at around the age of 3. Their L1 (i.e. Spanish) was their home language and also the majority language spoken in their birth city. From the description that they provide, we understand that their L2 was acquired after the system of the L1 was already in place or almost in place. Conversely, the bilinguals that participated in our study acquired both Basque and Spanish simultaneously before the age of 3. All of them reported to have acquired both languages before entering school and most of them reported to use both at home with their family. We categorized our participants as Basque/Spanish simultaneous bilinguals because the systems of both languages were built in parallel.

It may be the case that different types of bilinguals use different gender assignment strategies. This observation is backed up by Liceras et al.’s (2008) findings for English/Spanish. Additionally, they also found that their simultaneous English/Spanish bilingual group used the default strategy of assigning the default gendered determiner, *el*, to the ungendered English noun. Otheguy and Lapidus (2003) also proposed that masculine is the only productive gender in these mixed DPs, as long as the noun does not end in *a*. In the same way, we find that our bilinguals also prefer the masculine Spanish determiner, as long as the Basque noun does not end in *a*.

In sum, our study shows that L1 Spanish/L2 Basque early sequential bilinguals and simultaneous bilinguals use different gender assignment strategies in mixed DPs. The strategies used by simultaneous bilinguals from the Gernika region are the same as those used by English/Spanish simultaneous bilinguals.
6. Conclusions and Limitations

In our study, we have provided data to contribute to the discussion of the gender assignment strategies used by Basque/Spanish bilinguals in mixed DPs. More specifically, we have provided evidence that Basque/Spanish simultaneous bilinguals from the Gernika region use two different strategies when assigning a gendered Spanish determiner to a genderless Basque noun. In general, we find that they prefer the Spanish default determiner (i.e. the masculine) in the case of most Basque nouns; this is the same strategy used by early English/Spanish bilinguals (see Liceras et al. 2008). Nevertheless, for the subset of Basque nouns that end in lexical a, these bilinguals showed a preference for the Spanish feminine determiner, a choice that might be motivated by a phonological shape rule, as -a also happens to be the canonical ending for Spanish feminine nouns. Finally, we have also found that this bilingual community strongly dispreferred “double determiner constructions”.

Due to the differences that we observe for different bilingual profiles, it would be very interesting to study other Basque/Spanish bilingual communities in order to see what their gender assignment strategies are and, also, if it would be possible to find the existence of a solid pattern. Additionally, it would be interesting to administer an AJT to L1 Spanish/L2 Basque early sequential bilinguals that did not contain any mixed DP in a “double determiner construction” in order to see whether these bilinguals still show a preference for a feminine determiner when the noun those not end in a, or, on the contrary, they use the same default strategy as our bilinguals.

Even though we contend that our results do contribute to the ongoing discussion of gender assignment strategies, we are aware that the number of participants in our study might be too low to draw definitive conclusions. Thus, future studies should ideally include a larger pool of participants. Our next step will be to carry out the same experiment with an L1 Spanish/ L2 Basque group of a Bizkaian dialect (similar to Gernika Basque) in order to see
whether their gender assignment strategies pattern with Parafita-Couto et al.’s findings (the Spanish feminine determiner as the default) or whether they prefer the strategy of assigning a gendered determiner based on the gender of the analogue noun, as in the case of the L1 Spanish/L2 English group in Liceras et al. (2008).

Other types of data collection could be added to complement the tasks that we already employed, for instance, we believe that the use of a production task would yield very interesting data. In continuing with this line of research, it would be advisable to avoid Basque nouns that start with an “a”, such as “ariketa”-”activity, exercise” or “azterketa”-”exam”. The reason behind this is that perhaps as a result of cacophony between the Spanish feminine determiner, la, and the Basque noun (i.e.“la-ariketa”-”the activity, the exercise”), having a feminine or a masculine Spanish determiner made no difference for some participants, and this made it difficult to see a clear pattern in the case of these nouns. We observed that some participants tended to accept both the masculine and the feminine Spanish determiners with these nouns and they were also likely to give higher ratings to stimuli with a Spanish feminine determiner.
References


