

# When Articles Have Different Meanings: Acquiring the Expression of Genericity in English and Brazilian Portuguese\*

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This paper reports on an experimental study of the expression of genericity in the acquisition of English by native speakers of Spanish and Brazilian Portuguese, and in the acquisition of Brazilian Portuguese by native speakers of English and Spanish. English, Spanish and Brazilian Portuguese exhibit a three-way distinction in terms of which NP types are allowed with generic and kind interpretations. This difference leads to specific, testable predictions for the effects of cross-linguistic influence on the expression of genericity in second language acquisition. These predictions are tested in a small-scale study, by means of a written, context-based Acceptability Judgment Task. The results show that transfer from the learners' native language has a limited effect, and is overridden by considerations of register and/or input frequency. The findings pose interesting questions for further research.

## 1 Introduction

An important question in the field of second language (L2) acquisition is how L2-learners map syntax to semantics (see Slabakova 2008 for an overview). The interpretation of articles in the second language is one of the areas in which this question has been explored. A number of studies have examined how L2-learners use and interpret articles, and what learners' patterns of article (mis)use and/or (mis)interpretation can tell us about the factors involved in

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L2-acquisition (Huebner 1983; Thomas 1989; Ionin et al. 2004; Trenkic 2008, among many others). In the case of L2-learners whose first language (L1) lacks articles, many studies examine what factors (explicit strategies, input and instruction, access to semantic universals) influence learners' acquisition of article meaning. When the learners' L1 does have articles, the role of cross-linguistic influence, or L1-transfer, is considered, and studies ask to what extent learners transfer the meaning of articles in their L1 to those in their L2. Most studies on articles and nominals in the L2 have focused on *non-generic* contexts of article use; some non-generic uses are exemplified in (1), where the indefinites (*a lion, lions*) are interpreted existentially, and the definites (*the lion, the lions*)—anaphorically. Our current research program focuses instead on *generic* contexts of article use, exemplified in (2): unlike the sentences in (1), the ones in (2) talk about lions in general, rather than about any particular lion(s). (We consider only nominals in subject position, as in (2), leaving the interpretation of nominals in other syntactic positions for further research).

- (1) a. A lion is running towards us. The lion is hungry.  
 b. I see lions in the distance. The lions are asleep.
- (2) a. The lion is a dangerous animal.  
 b. Lions are dangerous animals.

In a series of recent studies, we have experimentally examined the expression of genericity with native speakers of English, Spanish, and Brazilian Portuguese (BrP) (Ionin et al. 2011a), and we have investigated the role of L1-transfer in the interpretation of NPs with and without articles in generic environments in the L2-English of Spanish speakers as well as in the L2-Spanish of English speakers (Ionin et al. 2013); we have also looked at how L2-English learners learn about the relationship between articles and genericity when their L1 (Russian or Korean) lacks articles (Ionin et al. 2011b). We have recently extended this investigation to the acquisition of BrP by English and Spanish speakers, as well as the acquisition of English by BrP speakers. As discussed in the next section, English, Spanish, and BrP differ from one another in how they express generic interpretation for NPs with and without articles; the three-way difference allows us to make testable predictions, based on L1-transfer, for the L2-acquisition of one of these languages by speakers of another. Here, we report on a small-scale study testing these predictions, and show that while L1-transfer does play a role in the expression of genericity in the L2, it is overridden by such considerations as input frequency of generic expressions and register. After discussing the findings, we pose questions for further research.

## 2 The Expression of Genericity in English, Spanish and Brazilian Portuguese

English allows three different NP types with generic readings, as shown in (3):<sup>1</sup> the variants with a definite singular (3a), indefinite singular (3b) and bare plural (3c) are all sentences about hummingbirds in general; ((3a-b) can also be interpreted as being about a specific hummingbird, but this reading is irrelevant for our purposes). In contrast, English definite plurals normally lack generic readings, so that (3d) can only be interpreted as a sentence about a specific group of hummingbirds (e.g., the ones outside the window), rather than hummingbirds in general. Finally, bare singulars in English are ungrammatical, whether used generically (as in (3c)) or otherwise (we focus only on count nouns here, leaving mass nouns aside).<sup>2</sup>

- (3) a. The hummingbird is a bird. [definite singular,  $\sqrt{\text{generic}}$ ]  
 b. A hummingbird is a bird. [indefinite singular,  $\sqrt{\text{generic}}$ ]  
 c. \*Hummingbird  $\text{\textcircled{is}}$  a bird. [\*bare singular]  
 d. The hummingbirds are birds. [definite plural,  $\# \text{generic}$ ]  
 e. Hummingbirds are birds. [bare plural,  $\sqrt{\text{generic}}$ ]

Spanish (and many other Romance languages, such as Italian and French) differs from English in using definite plurals rather than bare plurals for generic readings, as shown in (4d); unmodified bare plurals in preverbal (subject) position are generally ungrammatical in Spanish (4e). With regard to singular generics, Spanish patterns just like English (compare (4a-c) to (3a-c)).

- (4) a. El picaflores es un pájaro. [definite singular,  $\sqrt{\text{generic}}$ ]  
 the hummingbird is a bird

<sup>1</sup> Throughout this paper, we use the term 'NP' in a descriptive way, to encompass both NPs and DPs.

<sup>2</sup> Bare singulars are acceptable with some English NPs, in specific types of contexts, as in *going to school, being in jail, lying in bed*, etc.; see Stvan (1998) and Carlson, Sussman, Klein and Tanenhaus (2006) for discussion. We are grateful to Anne Zribi-Hertz (p.c.) for bringing this phenomenon to our attention. Our study did not include any NPs that can occur in bare singular form in English, so we leave this issue aside at present. In future research, it would be fruitful to consider how the existence of (lexically and contextually constrained) bare singulars in English may influence the acquisition of bare singulars in BrP by English speakers.

- b. Un picaflor es un pájaro.  
a hummingbird is a bird  
[indefinite singular, √generic]
- c. \*Picaflor es un pájaro.  
hummingbird is a bird  
[\*bare singular]
- d. Los picaflores son pájaros.  
the hummingbirds are birds  
[definite plural, √generic]
- e. \*Picaflores son pájaros.  
hummingbirds are birds  
[\*bare plural]

Finally, BrP differs from both English and Spanish in its expression of genericity, as shown in (5) (from Schmitt and Munn 1999, 2002; see also Müller 2002a,b). First, BrP allows both bare and definite plurals to have generic readings (5d-e); second, bare singulars are grammatical in BrP, and have generic readings (5c), on a par with definite and indefinite singulars (5a-b).

- (5) a. O beija-flor é uma ave.  
the hummingbird is a bird  
[definite singular, √generic]
- b. Um beija-flor é uma ave.  
a hummingbird is a bird  
[indefinite singular, √generic]
- c. Beija-flor é ave.  
hummingbird is bird  
[bare singular, √generic]
- d. Os beija-flores são aves.  
the hummingbirds are birds  
[definite plural, √generic]
- e. Beija-flores são aves.  
hummingbirds are birds  
[bare plural, √generic]

The judgments reported in (3) through (5) above, about which NP types are allowed in generic environments in English, Spanish and BrP, received experimental support from a study with native speakers by Ionin et al. (2011a). We next consider the sources of these generic readings.

### 2.1 Sentence-Level vs. NP-Level Genericity

As discussed by Krifka et al. (1995), genericity can come either from the sentence level or from the NP-level. At the sentence level, *generic* sentences are sentences that describe habitual or characteristic events/behaviours, in contrast to episodic sentences, which discuss specific events/behaviours. At the NP-level, *kind-denoting* NPs denote kinds rather than individuals. The two sources of genericity are in principle independent. Generic sentences can describe characteristic properties or behaviours of specific individuals, as in *Rex barks loudly*, or *That tiger is very dangerous*; these are cases of sentence-level genericity without NP-level genericity. Conversely, a kind-denoting NP can occur in an episodic (non-generic) sentence, as in *The rat arrived in Australia in 1788* (from Krifka et al. 1995): this sentence describes an episode in the history of the rat species, and *the rat* denotes the rat-kind rather than a specific rat.

The sentences in (3) through (5) above are all examples of sentence-level genericity: the generic reading is retained if the subject NP is replaced by a proper name (e.g., *Polly is a bird* describes Polly's characteristic property). We now consider which of the NP types in (3) through (5) can denote kinds at the NP-level, using Krifka et al.'s (1995) diagnostic of compatibility with a kind predicate, such as *be extinct / common / rare*.

As shown in (6), in English, kind-reference at the NP-level is available to definite singulars (6a) and bare plurals (6e), but not to indefinite singulars (6b) or definite plurals (6d) (for completeness, we include bare singulars (6c), which are ungrammatical). Spanish differs minimally from English, in that kind-reference at the NP level is available to definite singulars and definite plurals (rather than bare plurals, as in English).

- (6) a. The hummingbird is rare in the United States. [definite singular]  
b. #A hummingbird is rare in the United States. [#indefinite singular]  
c. \*Hummingbird is rare in the United States. [\*bare singular]  
d. #The hummingbirds are rare in the United States. [#definite plural]  
e. Hummingbirds are rare in the United States. [bare plural]

In BrP, kind-reference at the NP-level is available for definite singulars (7a) and definite plurals (7d), and unavailable for indefinite singulars (7b). In the case of bare singulars (7c) and bare plurals (7e), Schmitt and Munn (1999, 2002) as well as Dobrovie-Sorin and Oliveira (2008) argue that kind-reference is available, while Müller (2002a,b, 2003) argues that it is not. The experimental study of Ionin et al. (2011a) found that bare plurals were accepted as much as definite plurals in kind-reference contexts such as (7d-e), supporting Schmitt

and Munn's analysis. Ionin et al.'s findings on bare singulars (7c) were inconclusive: bare singulars were rated relatively low with kind-reference, but they were also not rated as high as expected in generic sentences (see section 3.4 below for a summary of the results).

- (7) a. O beija-flor é raro em São Paulo. [definite singular]  
 the hummingbird is rare in São Paulo
- b. #Um beija-flor é raro em São Paulo. [#indefinite singular]  
 a hummingbird is rare in São Paulo
- c. ?Beija-flor é raro em São Paulo. [bare singular]  
 hummingbird is rare in São Paulo
- d. Os beija-flores são raros em São Paulo. [definite plural]  
 the hummingbirds are rare in São Paulo
- e. Beija-flores são raros em São Paulo. [bare plural]  
 hummingbirds are rare in São Paulo

The ability of BrP bare singulars to have kind-reference was also studied by Oliveira, Silvo and Bressane (2010), who asked 200 native speakers of BrP to rate the acceptability of sentences with bare and definite singular NP subjects. They tested both sentences with kind predicates, and sentences with episodic predicates that impose a kind reading on the subject NP (cf. the example *The rat arrived in Australia in 1788*). Definite singulars were found to be more acceptable than bare singulars, with both types of predicates, and bare singulars were found to be more acceptable with kind predicates than with episodic predicates. Overall, the findings of Oliveira et al. (2010), like those of Ionin et al. (2010a), were somewhat inconclusive: bare singulars were to some extent allowed with kind readings, but not as fully as definite singulars. It is possible that both studies were confounded by register and/or modality: the studies used formal, written judgment tasks, whereas bare singulars are observed to be more natural in casual, oral speech (cf. Müller 2002b, Munn and Schmitt 2005). This issue is addressed by the other part of Oliveira et al. (2010), a corpus study of bare singulars in both oral and written corpora. Oliveira et al. found only a single instance of a bare singular NP subject with a kind predicate in the oral corpora (out of 22 instances total of kind predicates in the corpora), and several instances in the written corpora, including the example in (8). Thus, the status of bare singulars in BrP

remains inconclusive. The findings that bare singulars with kind readings are given low ratings in judgment tasks suggest that bare singulars cannot be kind terms. At the same time, the fact that bare singulars do sometimes (if infrequently) appear with kind predicates suggests the opposite. Furthermore, the fact that bare singulars were rated relatively low in subject position, in a written test, even in the absence of a kind predicate (in generic sentences, Ionin et al. 2010a) suggests that there may be syntactic restrictions on bare singulars in subject position which are independent of the availability of kind readings, and/or that register rather than grammar is responsible for the low ratings.

- (8) Boto chinês está extinto, dizem cientistas.  
 river-dolphin Chinese is extinct, say scientists  
 "The Chinese river dolphin is extinct, scientists say."

## 2.2 The Well-Defined Kind Restriction

Finally, yet another fact about kind-reference at the NP level has to do with the so-called 'well-defined kind' (WDK) restriction (term from Krifka et al. 1995; see also Carlson 1977; Vergnaud and Zubizarreta 1992; Dayal 2004). While both bare plurals and definite singulars in English can denote kinds (see (6)), the distribution of the latter is more restricted than the former, as shown in (9) (example from Carlson 1977, cited in Krifka et al. 1995:11). (9a), which discusses a well-defined kind, is perfectly fine on the kind interpretation of the definite singular-NP, but (9b), which is not about an existing kind, is ill-formed. In contrast, bare plurals are fine in both cases (9c-d).

- (9) a. The Coke bottle has a narrow neck. [non-generic reading ok]  
 b. #The green bottle has a narrow neck.  
 c. Coke bottles have narrow necks.  
 d. Green bottles have narrow necks.

Although the WDK restriction was originally discussed as a fact specific to English (see Carlson 1977; Vergnaud and Zubizarreta 1992), Dayal (2004) argues that it is a restriction on definite singular kind terms cross-linguistically. The experimental findings of Ionin et al. (2010a) support this claim: generic sentences of the form in (9b), with definite singular NPs that denoted non-well-defined kinds, were rated low in English, Spanish, and BrP. The WDK restriction did not affect any other NP type.

To sum up, the three languages under discussion behave the same with regard to definite singulars (which can denote kinds, and are subject to the

WDK restriction) and indefinite singulars (which can occur in generic sentences, and cannot denote kinds). In the case of plural NPs, English allows only bare plurals to have generic/kind readings, Spanish allows only definite plurals to have these readings, and BrP allows both. Finally, BrP is the only one of the three languages that allows bare singulars with generic readings, although the availability of kind-reference to bare singulars is still unresolved.

### 2.3 Theoretical Framework

Following Krifka et al.'s (1995) analysis of sentence-level genericity, we assume that indefinite singulars cross-linguistically cannot refer to kinds, and obtain generic readings as a result of binding by a generic operator. Turning to NP-level genericity, we adopt the semantic framework of Chierchia (1998) and Dayal (2004), in which kind readings of plural NPs are derived by the "Down" operator, which maps properties to functions from situations to the maximal individual satisfying that property in that situation. Following Dayal (2004, 2011), we assume that languages differ in whether the Down operator is lexicalized on the definite article (Spanish, which uses definite plurals for kind-reference), applies covertly (English, which uses bare plurals for kind-reference), or is lexicalized, but only optionally (BrP, which allows both definite and bare plurals for kind-reference).<sup>3</sup>

Turning to definite singular generics, we follow Dayal (2004) in assuming that, like canonical definites, they are derived by the "Iota" operator, which maps properties to the maximal individual satisfying that property. When the Iota operator applies to a common NP, it returns a unique individual bearing the property denoted by that NP; when it applies to a taxonomic NP, it

returns the unique taxonomic entity bearing the property denoted by the NP. Thus, *the lion* can denote either the unique lion in the discourse context, or the unique taxonomic entity 'lion'. Dayal suggests that the WDK restriction on definite singular generics is a pragmatic consequence of definite singular generics denoting taxonomic entities (see (9)): in the absence of special context, green bottles are not taxonomic entities, unlike Coke bottles. In contrast, plural generics are not subject to the WDK restriction, since they do not denote taxonomic entities, but rather are derived by the Down operator applying to a property.

Turning to bare singulars in BrP, there are two possibilities, in light of the still-unresolved empirical questions discussed above. For Müller (2002a, b), bare singulars are indefinite terms, which can be bound by a generic operator and hence occur in generic sentences, but cannot have true kind-reference. An alternative analysis of bare singulars as kind terms is proposed by Dobrovie-Sorin and Oliveira (2008): building on the finding that BrP bare singulars are number-neutral (Schmitt and Munn 2002), they propose that kind readings of bare singulars are derived by the Down operator applying to a number-neutral NP. On this analysis, kind readings of bare singulars are analogous to those of bare plurals and definite plurals (which are derived by the Down operator), and distinct from those of definite singulars (which are derived by the Iota operator applying to a taxonomic entity). This view is supported by the fact that definite singulars in BrP, but not bare singulars, are subject to the WDK restriction (Dobrovie-Sorin and Oliveira 2008; Ionin et al. 2012a).

### 2.4 Second Language Acquisition of Genericity in English and BrP

The cross-linguistic differences in the expression of genericity discussed above allow us to formulate specific predictions for second-language acquisition in this domain, with reference to transfer from the L1 to the L2.

Most L2-researchers today agree that at least some aspects of L2-acquisition are influenced by the learners' native language, a process known as L1-transfer (see, e.g., Dechert and Raupach 1989; Odlin 1989; Gass and Selinker 1992; Schwartz and Sprouse 1994, 1996; Schwartz 1998; Ellis 2006; among many others). Within the field of generative approaches to L2-acquisition, a particularly influential model is the Full Transfer / Full Access (FT/FA) model of Schwartz and Sprouse (1994, 1996), on which learners initially transfer the properties of their L1-grammar to their L2, but are also eventually able to acquire categories and features of the L2-grammar not instantiated in the L1, through direct access to Universal Grammar (UG). While the FT/FA as originally formulated focused primarily on morphosyntactic phenomena, recent studies on the L2-acquisition of semantics have provided evidence that L1-transfer also occurs

3 In this framework, bare plurals in English are unambiguously kind-denoting in all environments, while Spanish definite plurals are ambiguous between true definite readings (derived by the Iota operator) and kind readings (derived by the Down operator). On an alternative Ambiguity approach, based in the framework of Heim (1982) (e.g., Wilkinson 1991), English bare plurals are only kind-denoting when they appear with kind predicates. In all other environments, bare plurals are indefinite: e.g., in generic sentences like (3e), bare plurals, like indefinite singulars, are indefinite terms bound a generic operator (on Chierchia's approach adopted in the present paper, the generic operator quantifies over instances of the kind). Extending the Ambiguity approach to Spanish definite plurals leads to three-way ambiguity between canonical definite readings, kind readings, and indefinite readings (cf. Zamparelli 2002). For the sake of simplicity, we adopt the Chierchia/Dayal approach in our paper, although nothing in our study hinges on this choice. See Ionin et al. (2012a) for more discussion.

on the semantic level. Domains in which L1-transfer of semantics has been attested include quantifier scope (e.g., Marsden 2004), aspectual interpretation (e.g., Gabriele 2009) and the interpretation of nominals (e.g., Slabakova 2006; Ionin et al. 2013). Following prior literature, and consistent with the FT/FA model, we hypothesize that L2-learners initially transfer the semantics of their L1 onto their L2. That is, during the earlier stages of acquisition, and until the input informs them otherwise, learners assume that the semantic distinctions lexicalized in the L1 (such as perfective aspect, or definiteness, or kind-formation) are also lexicalized in the L2, that the distinctions not lexicalized in the L1 are not lexicalized in the L2, and that semantic operations apply in the same way in the two languages.

Testing this hypothesis specifically with regard to the semantics of nominals, we focus on four distinct populations: adult Spanish-speaking and BrP-speaking learners of English, as well as adult English-speaking and Spanish-speaking learners of BrP. Comparing two learner groups for each target language allows us to isolate the effects of L1-transfer from any developmental effects not related to the L1. The main goal of our study was to determine the extent to which L1-transfer influences the expression of genericity when the L1 and the L2 have subtly different article semantics.

As discussed above, English, Spanish and BrP behave the same on definite singular generics (which denote taxonomic entities) and indefinite singular generics (which are indefinites bound by a generic operator), so for those NP types, L1-transfer should lead to fully target-like performance for all learner groups. In contrast, these three languages differ on the interpretation of plural NPs in generic/kind contexts, with the Down operator lexicalized obligatorily in Spanish, optionally in BrP, and not at all in English. If L1-transfer plays a role here, then English-speaking learners of BrP should prefer bare plurals to definite plurals for generic/kind readings, while Spanish-speaking learners of BrP should do exactly the opposite. In the case of learners of English, BrP speakers should allow bare plural generics (which are grammatical in BrP as well as in English) more readily than Spanish speakers, while both groups should also incorrectly allow definite plural generics. Finally, L1-transfer should lead both English-speaking and Spanish-speaking learners of BrP to reject bare singulars, while BrP-speaking learners of English should overaccept bare singulars in generic contexts.

### 3 Experimental Study

#### 3.1 Participants

In order to test the predictions of L1-transfer outlined above, we have conducted two small-scale studies, one on the acquisition of English and the other on the acquisition of BrP. The adult learners in both studies took a multiple-choice cloze test estimating their proficiency in the target language (in the case of BrP, the cloze test was supplemented by a vocabulary test). The cut-off for inclusion in the study was a score of at least 50% on the proficiency test (this was above chance-level, since the test questions had more than two correct answers).

The participants in the English study were 26 adult Spanish speakers studying English in Argentina (mean proficiency test score 80%, range 50% to 98%), and 16 adult BrP speakers studying English in Brazil (mean proficiency test score 80%, range 55% to 98%).<sup>4</sup> An independent-samples t-test found no difference in proficiency test scores between the two groups of learners ( $p=.97$ ). Most of the learners had begun their study of English as children or adolescents, in a formal classroom setting, and had never lived in an English-speaking country.

The participants in the BrP study were 14 native English speakers studying BrP in the U.S. (mean proficiency test score 73%, range 58% to 88%) and 10 native Spanish speakers, of whom six were studying BrP in the U.S. and four—in Brazil (mean proficiency test score 80%, range 60% to 90%). An independent-samples t-test found no difference in proficiency test scores between the L1-English vs. L1-Spanish learners of BrP ( $p=.13$ ). All 24 learners of BrP had begun the study of BrP as adults, after age 18; the four who were living in Brazil had only a few months of residence there. Of the 14 English-speaking learners of BrP, 12 had studied Spanish prior to studying BrP, and one had studied French. All but one of the Spanish-speaking learners of BrP had studied English prior to studying BrP (the six Spanish-speaking learners of BrP who were tested in the U.S. were all highly proficient in English, being students at a U.S. university).<sup>5</sup> Thus, the learners of BrP were for the most part third language rather than second language learners of BrP, an issue we come back to in section 3.5.2.

<sup>4</sup> The 26 Spanish-speaking learners of English were selected from a larger group of 32 learners, in order to most closely match the BrP-speaking learners of English in proficiency. The results of all 32 Spanish speakers' performance on bare and definite plurals in English are reported in Ionin et al. (2013).

<sup>5</sup> Five of these six learners arrived in the U.S. as adults, for university study. The sixth was born in the U.S. to Spanish-speaking parents; since she reported speaking Spanish as her

The control groups in the English and BrP studies were 22 native English speakers living in the U.S., and 19 native BrP speakers living in Brazil, respectively. The results of these native-speaker participants are reported in Ionin et al. (2011a); they are repeated here in order to allow a direct comparison to the learner groups.

### 3.2 Test Instrument

The test instrument was an Acceptability Judgment Task (AJT) with contexts, the same one used in Ionin et al. (2011a,b). Two versions of the AJT (identical in content, format and ordering) were created, one in English and one in BrP. Both versions were placed on the internet using the survey gizmo tool. The AJT consisted of 40 items (20 test items and 20 fillers), and each item was a paragraph-long story followed by five different target sentences. The participants were asked to rate each sentence for its (un)acceptability in the context of the story, using a scale from 1 (unacceptable) to 4 (acceptable). The participants were explicitly instructed that they did not have to rank the sentences, and could give the same rating to two or more sentences. For the test items, the five sentences were identical except for the form of the subject NP (and the corresponding agreement on the verb), as shown below. The fillers tested differences of tense and aspectual interpretation. The 20 target items were broken down into five categories of four items each; we discuss two of the categories here, which tested NP-level genericity and sentence-level genericity, respectively (see Ionin et al. 2011a for discussion of other test categories). The 40 AJT items were arranged into four blocks and randomized for order of presentation within each block.

The Kind-reference category (NP-level genericity) is exemplified in (10) and (11) for the two languages. In this category, the subject NP is followed by a kind predicate. The Generic category (sentence-level genericity) is exemplified in (12) and (13). In this category, the subject NP denotes a non-well-defined kind (e.g. 'green lamp') and occurs in a generic sentence; the violation of the WDK restriction checks that learners are aware of the WDK restriction on definite singulars.

first language (and English as her second), she was classified as a Spanish-speaking learner of BrP for the purposes of the study. See section 3.5.2 for discussion of potential transfer from English vs. from Spanish for learners of BrP. Interestingly, this learner, despite being bilingual in English, showed no evidence of transfer from English to BrP: she rated bare plural generics in BrP very low, and definite plural generics high, just like the rest of the Spanish-speaking learners of BrP (and unlike the English-speaking learners of BrP).

The sentence variants expected to be rated high by native speakers are highlighted in the examples below; there was no highlighting in the actual test.

(10) *Kind-reference category (English)*: I really like going to the zoo. Unfortunately, there are many animals that can't be found in a zoo, or anywhere else. It's very sad. For example ...

- a. The dodo bird is extinct. [definite singular]
- b. A dodo bird is extinct. [indefinite singular]
- c. Dodo bird is extinct. [bare singular]
- d. The dodo birds are extinct. [definite plural]
- e. Dodo birds are extinct. [bare plural]

(11) *Kind-reference category (BrP)*: Eu gosto muito de ir ao zoológico. Infelizmente, há vários animais que nós não vemos mais no zoológico ou em nenhum outro lugar. É muito triste! Por exemplo ...

- a. O pássaro dodó está extinto. [definite singular]
- b. Um pássaro dodó está extinto. [indefinite singular]
- c. Pássaro dodó está extinto. [bare singular]
- d. Os pássaros dodó estão extintos. [definite plural]
- e. Pássaros dodó estão extintos. [bare plural]

(12) *Generic category (English)*: My brother has been in a bad mood lately. And no wonder: his apartment is so uncomfortable, it must be very depressing to live there. And he has a very dim and unpleasant overhead light. I told him he should buy a new lamp, something pleasant. For example, I know that ...

- a. The green lamp is very relaxing. [definite singular]
- b. A green lamp is very relaxing. [indefinite singular]
- c. Green lamp is very relaxing. [bare singular]
- d. The green lamps are very relaxing. [definite plural]
- e. Green lamps are very relaxing. [bare plural]

(13) *Generic category (BrP)*: O meu irmão tem estado de mal humor ultimamente. Não sem motivo: o apartamento dele é muito desconfortável e deve ser muito deprimente morar lá. E ele tem um lustre com uma luz muito fraca e desagradável. Eu disse a ele que ele deveria comprar uma luminária nova: alguma coisa agradável. Por exemplo, eu sei que ...

- a. A luminária verde é muito relaxante. [definite singular]
- b. Uma luminária verde é muito relaxante. [indefinite singular]
- c. Luminária verde é muito relaxante. [bare singular]
- d. As luminárias verdes são muito relaxantes. [definite plural]
- e. Luminárias verdes são muito relaxantes. [bare plural]

If the learners in our study transfer the interpretation of nominals from their L1, then we expect to see the following patterns of results. In the English study, both L1-Spanish and L1-BrP learners of English are expected to be accurate with regard to definite singular and indefinite singular generics ((10a,b) and (12a,b)), which function similarly in all three languages. Both groups are expected to incorrectly rate definite plural generics ((10d) and (12d)) high, since these are fully acceptable in Spanish and BrP; at the same time, BrP speakers are expected to be more accurate than Spanish speakers in accepting English bare plural generics ((10e) and (12e)), given that these exist in BrP. Finally, BrP speakers, but not Spanish speakers, are expected to rate bare singulars relatively high in the Generic category (10c) and possibly in the Kind-reference category (12c) (recall that the evidence on the status of bare singular kind terms in BrP is somewhat inconclusive).

Turning to the BrP study, we again expect both learner groups (L1-English and L1-Spanish learners of BrP) to be accurate with definite singular and indefinite singular generics ((11a,b) and (13a,b)), while giving lower ratings than native BrP speakers to bare singulars ((11c) and (13c)). With respect to plural generics, L1-English learners of BrP are expected to give higher ratings to bare plurals ((11e) and (13e)) than to definite plurals ((11d) and (13d)), while L1-Spanish learners of BrP are expected to do the opposite. Recall that both types of plural generics are acceptable for native BrP speakers, so both learner groups are expected to differ from native speakers on plural generics, but in different ways.

3.3 Results: English Study

Mean numerical ratings for each sentence type and subject group were entered into the statistical analysis. The results for the Kind-reference and Generic categories in the English study are presented in Figures 1 and 2, respectively. As Figure 1 shows, both learner groups were fairly similar to the native speakers except for noticeably lower ratings of definite singulars in the Kind-reference category. Figure 2 shows that learners were quite similar to native speakers in the Generic category, across all NP types.

We conducted a mixed Analysis of Variance (ANOVA) on the results for each category, with NP type (5 levels) as the within-subjects variable, and

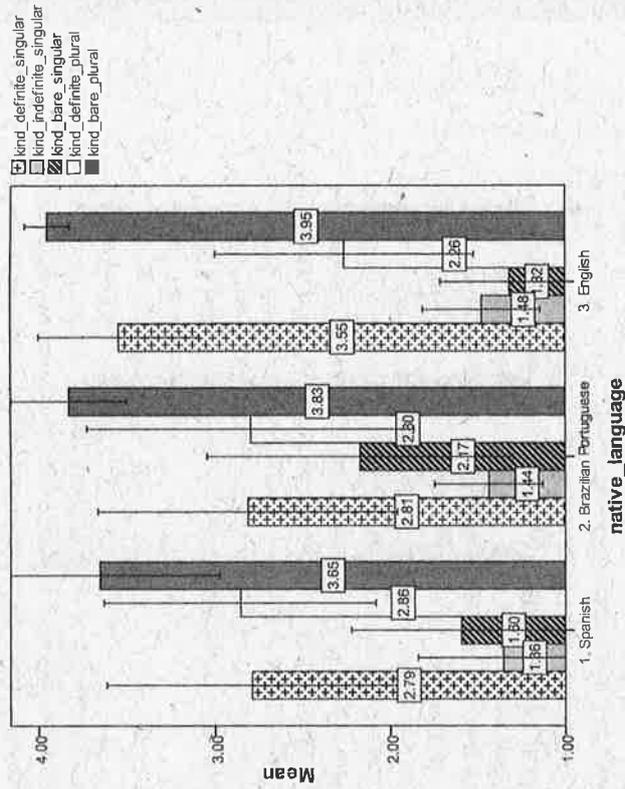


FIGURE 1 Results for the Kind-reference category, English study (mean ratings)

participant group (3 levels: native speakers vs. L1-Spanish learners of English vs. L1-BrP learners of English) as the between-subjects variable.<sup>6</sup> This analysis allows us to determine whether, for each category, there were differences in ratings among the five NP types, as well as among participant groups, and whether the pattern of ratings was similar among the participant groups. In both Kind-reference and Generic categories, NP type had a significant ( $p < .05$ ) effect on the ratings: i.e., the five different NP types were rated differently. There was no main effect of participant group, but there was a significant NP-type by

6 For all statistical analyses, we analyzed the Kind-reference and Generic categories separately. The rationale for this is that the categories were set up very differently, and any differences between them could be due to lexical material and/or contextual effects rather than the relevant factor of NP-level vs. sentence-level genericity. In contrast, the sentence types within each category were identical except for the form of the subject NP, so any differences in ratings are clearly due to the NP form.

than each of the learner groups, which did not differ from each other. The three groups also differed marginally on definite plurals, due to the Spanish group rating definite plurals marginally higher than the native English group; the BrP group did not differ from either of the other groups. The three groups did not differ on their ratings of indefinite singulars, bare singulars, or bare plurals.

The repeated-measures ANOVAs showed significant effects of NP type within each group. For the sake of readability, we do not report on the results of each pairwise comparison between each pair of NP types in each group, but instead report the overall patterns. First, all three groups rated bare plurals above all other NP types; however, the difference in the ratings of bare plurals and definite plurals was significant for the native speaker group, but only marginally significant for the two learner groups. Second, the native-speaker group rated definite singulars significantly higher than the three non-target NP types (indefinite singulars, bare singulars, and definite plurals), although still significantly lower than bare plurals. On the other hand, both learner groups rated definite singulars no differently from definite plurals. Third, all three groups rated indefinite singulars and bare singulars very low, significantly below all other NP types (the only case where bare singulars were not rated below all other NP types was as follows: BrP speakers rated bare singulars no differently from definite singulars, and marginally higher than indefinite singulars).

### 3-3-2 Statistical Comparisons on the Generic Category, English Study

The one-way ANOVAs comparing the three groups on the five NP types in the Generic category found that the groups differed marginally on their ratings of indefinite singulars and bare singulars: both learner groups rated indefinite singulars marginally lower than native speakers did, and the BrP group alone rated bare singulars marginally higher than native speakers did. The three groups did not differ from one another in their ratings of definite singulars, definite plurals, or bare plurals.

The repeated-measures ANOVAs showed significant effects of NP type within each group. The patterns of results were highly similar across the three groups. All three groups rated bare plurals and indefinite singulars significantly higher than the three non-target NP types (while native speakers rated bare plurals significantly above indefinite singulars; the two learner groups made no such distinction). The two learner groups gave equally low ratings to the three non-target NP types (definite singulars, bare singulars, and definite plurals), while the native speaker group rated bare singulars significantly lower than the other non-target NP types. Otherwise, performance in the three groups was nearly identical.

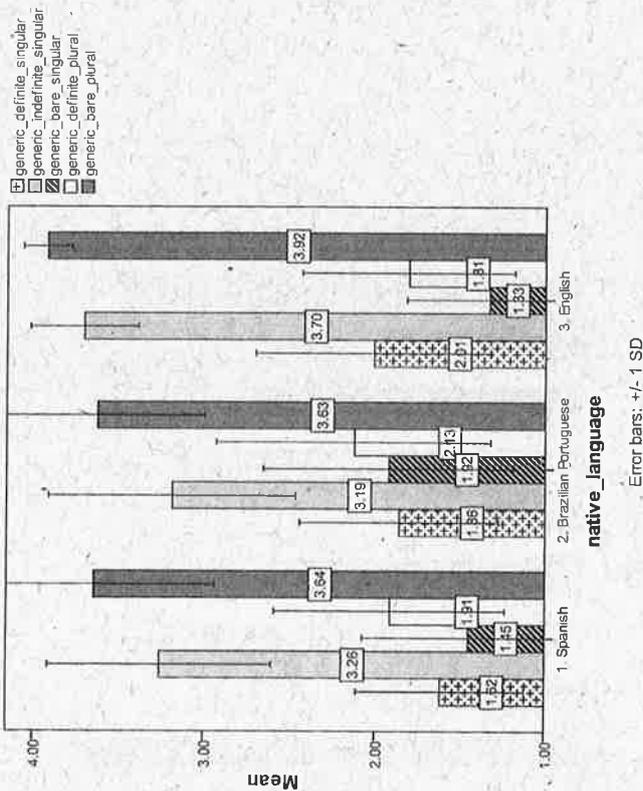


FIGURE 2 Results for Generic category, English study (mean ratings)

group interaction: i.e., the three participant groups did not exhibit the same pattern of ratings. In order to explore exactly where the differences among the groups lay, we conducted multiple follow-up comparisons (a Bonferroni correction was used to avoid inflating the Type I error rate). First, we conducted five one-way ANOVAs comparing the three groups on each NP type: the goal of this comparison was to see whether the groups differ on all NP types, or only some of them. Second, we conducted three repeated-measures ANOVAs examining the effect of NP type within each group: the goal of this comparison was to examine the pattern of ratings within each participant group. We report the results for each category in turn.

### 3-3-1 Statistical Comparisons on the Kind-Reference Category, English Study

The one-way ANOVAs comparing the three groups on the five NP types in the Kind-reference category found that the groups differed significantly in their ratings of definite singular NPs: native speakers rated them significantly higher

### 3.3.3 Summary: English Study Results

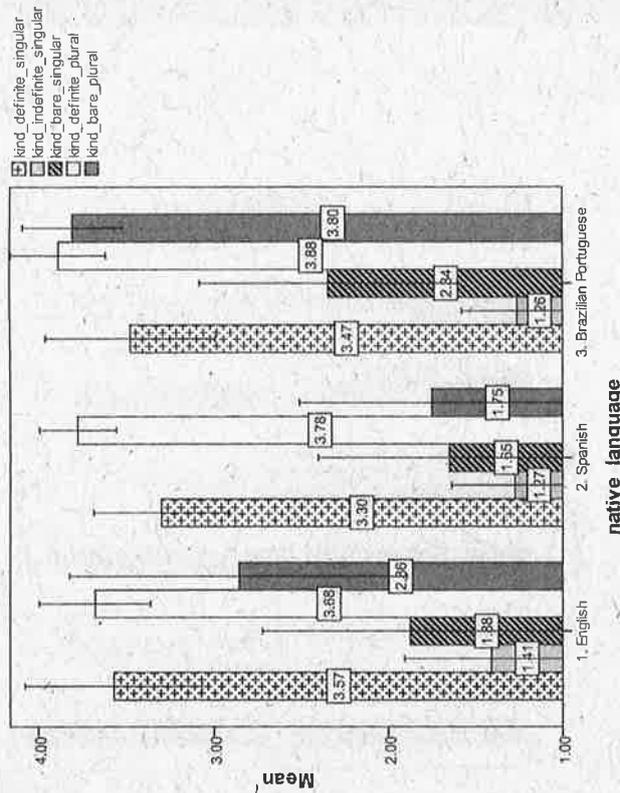
To sum up, overall both learner groups were quite target-like and similar to native speakers in their performance. The only clear difference between the two learner groups and the native group was the relatively low ratings of definite singulars by the learner groups in the Kind-reference category. This effect is not explained by L1-transfer, since definite singulars have kind-reference in Spanish and BrP as well as in English. There were no noticeable L1-transfer effects: while the two learner groups did rate definite plurals with Kind-reference higher than native speakers, this difference was only marginal, and was not replicated in the Generic category. The two learner groups had clearly acquired the fact that bare plurals, and not definite plurals, are used for generic/kind readings in English. Transfer effects from bare singulars in BrP were also very slight, resulting in marginally elevated ratings in the Kind-reference category alone.<sup>7</sup>

### 3.4 Results: BrP Study

The results for the Kind-reference and Generic categories in the BrP study are presented in Figures 3 and 4, respectively. The striking result in both figures is that the two learner groups rated bare plurals well below definite plurals, in both categories, while native speakers rated the two NP types the same. The contrast between bare and definite plurals was particularly large for the Spanish group, but also present for the English group. The second noticeable difference is that bare singulars were rated very low by both learner groups in both categories, including the Generic category, where bare singulars were rated relatively high by native speakers.

We conducted a mixed ANOVA on the results for each category, with NP type (5 levels) as the within-subjects variable, and participant group (3 levels) as the between-subjects variable (see the previous section for an explanation of mixed ANOVAs). In both categories, NP type and group had significant effects

7 Given the small size of our sample, we grouped all learners together regardless of proficiency. In order to examine whether proficiency had any effect on performance, we computed partial correlations between the proficiency test score and the mean rating on each category/NP-type combination, controlling for the learners' native language (native English speakers were excluded from this analysis). Significant positive correlations were found between the proficiency score and the ratings of bare plurals in the Kind-reference category ( $r=.32$ ,  $p<.05$ ) as well as the ratings of definite singulars in the Kind-reference category ( $r=.50$ ,  $p<.01$ ): as proficiency went up, learners became more target-like in these conditions. Additionally, a marginal inverse correlation was found between proficiency and the ratings of definite plurals in the Generic category ( $r=-.26$ ,  $p=.10$ ).



Error bars: +/- 1 SD

FIGURE 3 Results for the Kind-reference category, BrP study (mean ratings)

on performance, and interacted with each other ( $p<.05$ ): the patterns of ratings across the five NP types were different across the groups. In order to explore this interaction, we conducted five one-way ANOVAs comparing the three groups on each NP type, as well as three repeated-measures ANOVAs examining the effect of NP type within each group (see the previous section for an explanation of these follow-up comparisons). We report the results for each category in turn.

3.4.1 Statistical Comparisons on the Kind-Reference Category, BrP Study  
The one-way ANOVAs comparing the three groups on the five NP types in the Kind-reference category found that the groups differed significantly in their ratings of bare plurals: native speakers rated bare plurals significantly higher than did each of the learner groups, and English-speaking learners of BrP rated bare plurals significantly higher than did Spanish-speaking learners. The three groups did not differ from one another on any of the other four NP types.

Additionally, the English group rated bare plurals significantly higher than did the Spanish group; the two learner groups did not differ on bare singulars. The three groups did not differ on definite singulars, indefinite singulars, or definite plurals.

The repeated-measures ANOVAs showed significant effects of NP type within each group. The patterns of results were as follows (because of the small sample sizes, numerically large differences did not always come out as significant). First, all three groups rated definite plurals and indefinite singulars equally high. Second, the native BrP group and the English group rated bare plurals as high as definite plurals, while the Spanish group rated definite plurals marginally higher than bare plurals. Third, the native BrP group rated bare singulars as high as indefinite singulars, and marginally above definite singulars; in contrast, both learner groups rated bare singulars significantly below indefinite singulars and no differently from definite singulars. Additionally, the two learner groups rated bare plurals no differently from bare singulars and definite singulars, while the native BrP group rated bare plurals significantly above these two NP types.

### 3-4-3 Summary: BrP Study Results

To sum up, the major difference among the groups had to do with the ratings of bare plurals, where there was a clear three-way distinction, in both Kind-reference and Generic categories. The native BrP group rated bare plurals high, on a par with definite plurals; the English group rated bare plurals numerically (though not statistically) lower than definite plurals; and the Spanish group rated bare plurals significantly below definite plurals. The three groups differed from one another in their ratings of bare plurals, but not in their ratings of definite plurals. The difference between the English and Spanish groups is likely to be due to L1-transfer since English, unlike Spanish, allows bare plurals with generic/kind readings. However, L1-transfer cannot explain why English speakers still rated definite plurals above bare plurals in BrP: transfer from English should have led to the opposite result.

The second major finding has to do with the ratings of bare singulars: in the Generic category, bare singulars were rated relatively high by native speakers, but very low by both learner groups. This difference again is consistent with L1-transfer, since bare singulars are ungrammatical in both English and Spanish.<sup>8</sup>

8 In the BrP study, as in the English study, we examined the effects of proficiency by computing partial correlations between the proficiency score and the mean rating for each condition.

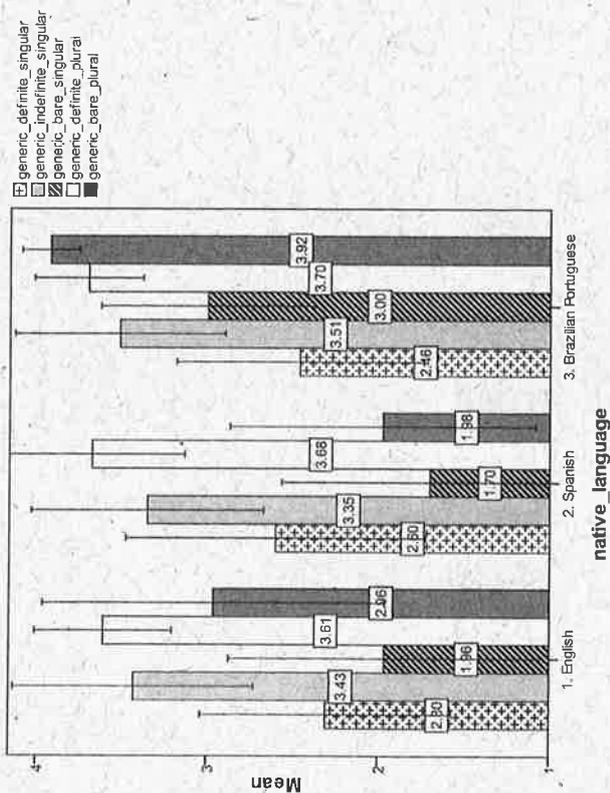


FIGURE 4 Results for the Generic category, BrP study (mean ratings)

The repeated-measures ANOVAs showed significant effects of NP type within each group. The patterns of results were as follows. First, both the native BrP group and the English group rated definite plurals no differently from bare plurals, while the Spanish group rated definite plurals significantly above bare plurals. Second, all three groups rated definite singulars as high as definite plurals (for the native BrP group, definite plurals were rated marginally higher than definite singulars). Third, the native BrP group rated bare singulars significantly above indefinite singulars, but significantly below the other three NP types; in contrast, the two learner groups rated bare singulars as low as indefinite singulars. The Spanish group, furthermore, rated bare plurals as low as bare singulars.

### 3-4-2 Statistical Comparisons on the Generic Category, BrP Study

The one-way ANOVAs comparing the three groups on the five NP types in the Generic category found that the groups differed significantly on their ratings of bare singulars and bare plurals: the native BrP group rated both bare singulars and bare plurals significantly higher than either of the two learner groups.

### 3.5 Discussion

Our original hypothesis was that learners would transfer the expression of genericity from their L1 to their L2. Based on this transfer hypothesis, we predicted target-like performance on definite singular and indefinite singular generics, combined with non-target-like performance on plural generics. Specifically, we expected over-acceptance of English definite plural generics by both Spanish and BrP speakers, as well as over-rejection of English bare plural generics by Spanish speakers. In BrP, where both bare plural and definite plural generics are acceptable, we expected English speakers to rate bare plurals higher than definite plurals, and Spanish speakers to do the opposite. Finally, we predicted over-acceptance of English bare singulars by BrP speakers, and over-rejection of BrP bare singulars by English and Spanish speakers. However, these predictions were only partially confirmed, as discussed below.

Overall, we found the learners in both the English and the BrP studies to be quite target-like on most of the conditions tested. The learners were sensitive to the WDK restriction on definite singulars, as evidenced by low ratings of definite singulars in the Generic category, where this restriction was violated; the learners also correctly allowed indefinite singulars in generic sentences, but disallowed them with kind-reference. Both of these findings can be traced to L1-transfer, since English, Spanish and BrP all have the WDK restriction on definite singular kind terms, as well as use indefinite singular NPs in generic sentences.

Not traceable to L1-transfer, on the other hand, is learners' success with plural generics. First, both Spanish-speaking and BrP-speaking learners of English were successful at accepting bare plurals and rejecting definite plurals in generic and kind-reference contexts, even though Spanish and BrP differ from English with regard to plural generics. Second, English-speaking and Spanish-speaking learners of BrP were equally successful at accepting definite plurals in generic and kind-reference contexts, even though English, unlike Spanish, uses bare plurals in such environments. We conclude that positive evidence is sufficient to override L1-transfer in this domain, and to lead learners to

controlling for the learners' native language (native BrP speakers were excluded from this analysis). Given the small size of the sample, no correlations were found to be significant, but there were marginal positive correlations between the proficiency score and the mean ratings of bare singulars in the Generic category ( $r = .41$ ,  $p = .053$ ), as well as the ratings of indefinite singulars in the Generic category ( $r = .35$ ,  $p = .1$ ). Interestingly, ratings of bare plurals (which were quite low for the learner groups in comparison to the native group, as noted above) did not improve with proficiency.

acquire the target semantics (namely, that the Down operation is not lexicalized on the definite article in English, but is lexicalized in BrP). We note that similar success has been found for English-speaking learners of Spanish, who also correctly assigned generic/kind readings to definite plurals (Ionin et al. 2013).

At the same time, learners were not target-like across the board. Clear differences between learners and natives were found in three distinct places: (1) in the English study, both learner groups rated definite singulars in the Kind-reference category lower than native speakers did; (2) in the BrP study, bare plurals were rated lower by the English group than by the native BrP group, and lowest of all by the Spanish group; and (3) in the BrP study, bare singulars in the Generic category were rated lower by the two learner groups than by the native BrP group. We consider each of these findings in turn.

#### 3.5.1 Low Ratings of Definite Singular Kind Terms in Learners' English

The finding that definite singulars in the Kind-reference category were rated low by both Spanish-speaking and BrP-speaking learners of English is quite puzzling. As discussed earlier, both Spanish and BrP use definite singulars with kind-reference. In fact, BrP speakers tested in their native language gave definite singulars with Kind-reference the mean rating of 3.47 (Figure 3), while BrP-speaking learners of English rated the same condition at only 2.81 (Figure 1). Similarly, as reported in Ionin et al. (2010a), Spanish speakers tested on the Spanish version of the AJT rated definite singulars with Kind-reference at 3.77; in contrast, Spanish-speaking learners of English rated the same condition at only 2.79 (Figure 1). Thus, the learners do not appear to be transferring the availability of kind readings of definite singular NPs (in theoretical terms, the ability of the definite article to combine with a taxonomic NP) from their L1 to their L2. It is possible that the learners are exhibiting hypercorrection: having learned that definite plurals are disallowed with generic/kind readings in English (unlike in Spanish or BrP), they overgeneralize and disallow definite singular kind terms as well.

As reported in Ionin et al. (2010b), L2-English learners from article-less L1s, Russian and Korean (who were of comparable English proficiency to the learners in the present study, and tested on the same English AJT as the learners in the present study) exhibited a complete lack of knowledge that definite singular NPs are allowed with Kind-reference (while being fairly target-like on other NP types). The learners in Ionin et al. (2010b) were less target-like than those in the present study: they rated definite singulars very low both in the Kind-reference category (where the WDK restriction holds) and in the Generic category (where this restriction is violated), whereas the learners in the present

study did make a distinction between the two (compare the ratings of definite singulars in Figures 1 and 2). Thus, having articles, and definite singular kind terms, in the native language (Spanish or BrP) does seem to confer an advantage over having no articles and no definite singular kind terms in the native language (Russian or Korean). However, English definite singular kind terms appear to present difficulty even for learners coming from a language with articles.

In Ionin et al. (201b), it was argued, based on the findings of Biber et al. (1999) and Yoo (2009), that taxonomic definites are particularly rare in English input and introduced late in English instruction, and that this is largely responsible for learners' difficulties. Interestingly, learners do not appear to generalize from canonical definites to taxonomic definites: learning that definites can denote unique/maximal individuals does not lead learners to generalize that definites can also denote unique/maximal taxonomic entities.<sup>9</sup> This is inconsistent with Dayal's (2004) view that taxonomic definites are derived by the same mechanism as canonical definites: the same definite article (which encodes the *lota* operator) combining with a taxonomic NP rather than a common NP. It is possible Dayal is not entirely correct, and taxonomic definites are derived by a different mechanism than canonical definites (cf. Ojeda 1991, Chierchia 1998), which learners have not yet acquired. Alternatively, if taxonomic and canonical definites *are* derived by the same mechanism, then we need to conclude that learners do not have a full grasp of what definiteness is: they learn based on the input, acquiring only those types of definites to which they have been directly exposed, and not generalizing across definite environments. The relatively low frequency of definite singular kind terms means that even learners from native languages which have definite singular kind terms (Spanish and BrP) do not assume English to have them as well. Recall that we found a strong and significant correlation between proficiency and ratings of English definite singular kind terms (footnote 7). This suggests that either more proficient learners have received more input in English (and hence more input containing definite singular kind terms); or else that they have a

9 Evidence that the learners did acquire the basic use of definite singulars as denoting unique individuals comes from learners' target performance in a control category of anaphoric definiteness (see Ionin et al. 201a,b for discussion of this category). The Spanish-speaking and BrP-speaking learners of English in the present study were fully target-like at accepting definite singulars with anaphoric readings, giving them ratings of 3.73 and 3.84, respectively (compared to 3.90 for native speakers), much higher than the ratings for definite singulars in the Kind-reference category.

better grasp of the concept of definiteness, and (even without necessarily getting much input with definite kind terms) have generalized from canonical definites to taxonomic definites.

Note that English-speaking and Spanish-speaking learners of BrP did not face the same problem with definite singular kind terms in BrP (see Figure 3). We also have data (not reported here) on English-speaking learners of Spanish, who rated Spanish definite singular kind terms nearly as high as native speakers (ratings of 3.50 vs. 3.77). Thus, the problem of definite singular kind terms appears to be exclusively a problem for learners of English. It is possible that definite singular kind terms are less common in English input than in Spanish and BrP input; however, this explanation requires corpus data to support it. An alternative explanation is that learners of Spanish or BrP, having learned that the target language uses definite plurals for generic/kind readings, simply generalize to definite singulars: they assume that any definite NP can be used for generic/kind readings. However, we do not believe this can be the entire explanation: as shown in Figures 3 vs. 4, learners of BrP accept definite singulars only in reference to well-defined kinds (Figure 3) and not with non-well-defined kinds (Figure 4), while definite plurals are accepted in both contexts. Simply generalizing from definite plurals to definite singulars would not lead to this result: the learners are clearly distinguishing between definite plurals (which denote kinds of any type) and definite singulars (which denote only taxonomic entities).

We leave the problem of English definite singular kind terms, and the question of why Spanish and BrP definite singular kind terms do not present the same problem, as issues requiring further investigation.

### 3.5.2 Low Ratings of Bare Plurals in Learners' BrP

We now consider the fact that bare plurals were rated lower by learners of BrP than by native speakers. English speakers were more target-like than Spanish speakers, indicating a facilitating effect of L1-transfer for the English-speaking learners of BrP. Nevertheless, even English speakers rated definite plurals in BrP higher than bare plurals, the opposite of what transfer from English would predict.

A possible explanation for the preference for definite plurals over bare plurals in the BrP of English speakers is transfer from Spanish: as discussed above, 12 of the 14 English-speaking learners of BrP had learned Spanish as their second language (and one more had learned French), so that BrP was really their third language. It is possible that, faced with the task of learning BrP, learners draw on the other Romance language that they know; since Spanish (and French) use definite plurals rather than bare plurals for generic/kind read-

ings, the learners conclude that BrP must do the same.<sup>10</sup> Note that nine of the ten Spanish-speaking learners of BrP in the present study knew English, yet they did not appear to be drawing on their knowledge of English in making judgments about BrP, as evidenced by their very low ratings of bare plurals with generic/kind readings. This suggests that learners of BrP who know both English and Spanish draw primarily on Spanish, and not on English, in making judgments about plural NP interpretation in BrP—regardless of whether Spanish is their L1 or their L2. This is consistent with the findings of Montrul et al. (2009) as well as Montrul et al. (2011) in very different domains of BrP (null and overt subjects in Montrul et al. 2009, object expression and clitics in Montrul et al. 2011). Montrul et al. (2009, 2011) found that learners of BrP as a third language who knew both Spanish and English transferred from Spanish and not from English, regardless of which was their L1 and which—their L2. Montrul et al. (2011) argue for a role of *perceived structural similarity*: learners of BrP perceive BrP as being more like Spanish than like English, and transfer accordingly (cf. Rothman 2011 for a similar claim). The same explanation can potentially apply to the findings of the present study (see Ionin et al. 2011c for more discussion of this possibility).

An alternative explanation is that a preference for definite plural generics over bare plural generics is a general feature of the acquisition of BrP, not related to transfer from Spanish. Once again—as with definite singular kind terms in English—input would appear to play a role. Bare plurals in BrP are quite formal, constrained largely to written, academic registers (cf. Müller 2002b); in contrast, definite plurals are quite natural in everyday speech as well as in writing. If learners of BrP are exposed to definite plurals more than bare plurals, this would naturally lead to the higher ratings of definite plurals. In order to explore this question further, it is necessary both to consider corpus data, and to test learners on a greater variety of environments where bare plurals are allowed (such as existential contexts), in order to determine whether learners have any knowledge of BrP bare plurals.

<sup>10</sup> This explanation presupposes that the learners know that Spanish uses definite plurals rather than bare plurals for generic/kind readings. Indirect evidence for this comes from Ionin et al.'s (2013) study of the acquisition of Spanish, which found English-speaking learners of Spanish to be very accurate at accepting definite plurals rather than bare plurals with generic/kind readings. However, more direct evidence would come from the same group of English speakers being tested both on Spanish (their second language) and BrP (their third language), and a comparison of their performance in the two languages. Such testing is currently ongoing.

### 3-5-3 Low Ratings of Bare Singulars in Learners' BrP

Finally, we consider the fact that learners rated bare singulars in the Generic category lower than native speakers did. This is a difficult finding to evaluate, since even native BrP speakers rated bare singulars lower than other target NP types (bare plurals, indefinite singulars, definite plurals). The formal, written nature of the AJT may have artificially lowered ratings of bare singulars, which are used more in casual speech (the opposite of bare plurals); furthermore, given that our study investigated a very limited set of syntactic environments, it is not clear whether our findings with bare singulars would generalize to other contexts (e.g., kind and generic readings in object position). In order to more fully explore what learners know about BrP bare singulars, it is first necessary to establish contexts where bare singulars are fully acceptable for native speakers. Based on the current results, it is impossible to say whether learners consider bare singulars in BrP to be entirely ungrammatical, or whether they would allow them in a different syntactic configuration, and/or in spoken rather than written register. We are currently preparing a study of bare singulars in BrP that will address these issues.

## 4 Conclusion

The study reported here indicates that L1-transfer plays a limited role in the expression of genericity for learners of English and BrP, and that L1-transfer is overridden by considerations of frequency in the input and/or register. Both definite singular kind terms in English, and bare plurals in BrP, are formal and not overly frequent expressions, and both caused difficulty for learners regardless of their L1; bare singulars, which are more common in oral, casual registers, also presented difficulty. In contrast, those NP types that are used freely (and frequently) across registers, such as bare plurals in English, definite plurals in BrP, and indefinite singulars in both languages, were successfully acquired.

The present findings suggest several avenues for future research. First, as noted above, it is important to determine whether learners of BrP who know both English and Spanish are transferring from one or both languages; to this end, we are now testing learners both in their third language (BrP) and their second language (English vs. Spanish). It is also important to test English-speaking BrP learners who have not studied Spanish (or any other Romance language), in order to determine whether the high ratings of definite plurals are due to transfer from Spanish.

Second, we are planning to test a greater variety of syntactic configurations for both generic and existential readings of bare singulars and bare plurals

in BrP; the goal is to determine whether learners simply reject all bare NPs in BrP as ungrammatical, or whether they are sensitive to differences among contexts. Finally, in order to make the discussion of input effects on acquisition less speculative, it is necessary to collect more information about both input frequency and register effects for bare NPs in BrP. We hope that the present study is the first step towards a more in-depth investigation of nominal and article semantics in the acquisition of BrP as a second or third language.

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