

Specificity Effects in L2 Determiner Acquisition: UG or Pragmatic Egocentrism?

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1. Introduction

Ionin, Ko & Wexler (2004) and following work report that article use by L2 learners of English from L1 article-less languages (Russian, Korean) fluctuates between specificity and definiteness. These researchers argue that this fluctuation reflects access to a UG-based semantic parameter. We question this hypothesis on the basis of an experimental investigation of the acquisition of determiners by learners of L2 French, a definiteness-based language, with definiteness-based L1 (Dutch and Arabic). Our results show that Dutch and Arabic L2 beginners acquire French articles with a specificity bias fully comparable to L2 learners with article-less L1. This suggests that L1 transfer does not prevent specificity-biased errors, contrary to the expectation of a parameter-based account. Since the parametric account fails to explain why resort to UG should prevail over L1 transfer in these cases, we explore an alternative, pragmatic account for these specificity-based errors.

The paper is organized as follows. In section 2 we review previous studies on the L2 acquisition of the definite and indefinite article and their proposed accounts. In section 3 we present our own experimental studies on the L2 acquisition of French articles by learners with two distinct definiteness-based L1s and show the presence of a comparable specificity bias in the errors they produce. In section 4 we discuss the role that proficiency plays in this acquisition. In section 5 we explore a pragmatic explanation for our results. In section 6 we conclude the paper with follow up questions.

2. Background

In recent literature, the characteristic misuse of definite and indefinite articles by L2 learners has received various explanations.

Ionin (2003) argues that specificity and definiteness are two values of a semantic parameter, which she terms the Article Parameter. This parameter distinguishes languages whose article system makes lexical distinctions based on definiteness from languages whose article system makes lexical distinctions on the basis of specificity. Ionin, Ko & Wexler (2004) argue that the article errors that L2 learners with article-less L1 make show that their interlanguage grammar fluctuates between the two values of this UG parameter. In the absence of L1 transfer, on their view, L2 learners resort to UG parameters and only gradually fix the value pertinent to the acquired L2. This would explain the fluctuation.

Hawkins et al. (2006) argue that at an individual level there is no fluctuation. For Hawkins et al. L2 learners have access to the interpretable features provided by UG, but they misrepresent the feature specification of the L2 articles. Hawkins et al. show that Greek L2 learners of English can correctly represent the features of English articles. They do so, according to Hawkins et al., because they transfer the feature representation of articles from their L1.

L2 misuse of definite and indefinite articles exhibits a strong similarity to the errors that are characteristically found in the acquisition of L1. For child acquisition these errors have variously been attributed to syntactic failure, semantic failure or pragmatic immaturity. One pragmatic account associates these errors with children's egocentric perspective (Maratsos 1974, 1976, among others). Maratsos shows that young children use indefinite articles instead of definite articles and vice versa. In a definite-eliciting condition a story was told about a woman who had a boy and a girl. Upon the question 'Who was making noise?' young children (3;0-3;6) responded with an indefinite article (a

boy/a girl) almost half of the time. This suggests that children do not take into account the common ground, viz. the introduction of a unique boy and girl in the preceding discourse pronounced by the speaker. Similarly, in the indefinite-eliciting condition of Maratsos' experiment, a story was told about four boys and four girls, which was followed by the question 'Who was making noise?'. In this condition 4;0-5;0 year old children often used the definite article, which suggests, according to Maratsos, that children privilege a speaker oriented egocentric perspective and fail to take into account the common ground that is central to the proper use of definite determiners. The children use articles as if there was a common unique referent in the preceding discourse pronounced by the speaker, even if this is not the case. A similar pragmatic egocentricity-based account is offered in Schaeffer & Matthewson (2005). They used an elicitation test to examine the acquisition of articles by children aged 2;1-3;10. In their test children overused *the* when the referent was known to the speaker, and yet not part of the common ground.

Ko et al. (2010) also show that like children, L2 learners misuse definite articles both in specific and in partitive contexts. Yet they argue against an egocentricity-based account of this article misuse. Adult L2 errors, on their view, cannot be biased by egocentricity in the choice of the articles because these speakers are pragmatically mature, and consequently, have already overcome the developmental stage during which children typically exhibit an egocentric perspective on the world. For L2 data, in their view, the UG-based semantic account is therefore superior. Furthermore, given the large L2/L1 similarity in article errors, and given that the semantic account can extend to L1 data, by Occam's razor, they argue, an egocentricity account is not needed to explain L1 article errors either.

We question this conclusion with data that show that similar article-use errors are produced by beginning L2 learners, even in cases in which L1 transfer would be expected. From the perspective of an Article Parameter account the presence of specificity-based errors in L2 learners with a definiteness-based L1 is unexpected. It implies that resort to UG-based parametric values should prevail over resort to L1 transfer. We argue that such a prevalence is first rather surprising given current theories of L2 acquisition, second entirely unexplained on Ionin et al.'s view, and third at best suspicious, given that it implies that L2 learning should begin by ignoring or unlearning an L1 parameter setting before reacquiring the very same parameter setting again in the course of L2 acquisition. Since such evidence heavily stacks the deck against a parametric account, we propose to re-explore the plausibility of an egocentricity-based pragmatic account of these L2 errors. We argue that if resort to an egocentric perspective is understood in computational terms rather than in development terms, then current psychology findings (Keysar et al. 2000) make such an account fully plausible for pragmatically mature L2 speakers. Ionin et al.'s main argument against a pragmatic egocentric-based account of L2 specificity-based article errors is thus removed and the ground is laid for a renewed exploration of egocentricity-based accounts of L2 determiner errors.

3. The Present Studies

Since most current parametric models of L2 acquisition take the initial state to be equal to L1 parameter setting, transfer should override UG whenever possible. This means that L2 learners with an article-based L1 should prefer to resort to transfer (see Hawkins et al. 2006 and Ionin, Zubizaretta & Bautista Maldonado 2008). If so, fluctuation should not be observed in cases where L1 and L2 manifest the same parametric setting for a given parameter. In this paper we test Ionin et al.'s article parameter. We investigate whether, for L2 learners of a definiteness-based article system with a definiteness-based article system in their L1, transfer operates to facilitate correct article use, as predicted by a parametric account, or whether fluctuation and specificity-based article misuse occurs independently of L1 setting. We provide the results of two experiments testing the acquisition of articles in L2 French, a definiteness-based language different from English. The tested learner populations are adolescents and children, speakers of two distinct definiteness-based L1, Dutch and Arabic. In section 3.1, we present the article systems of Dutch, French, and Arabic. In section 3.2, we present the results of our studies.

3.1. The article systems of Dutch, French, and Arabic

In this paper we investigate whether L2 learners of the definiteness-based language French transfer this parameter setting from their definiteness-based L1, Dutch or Arabic, or whether they fluctuate between

a definiteness setting and a specificity setting. In this subsection we present the article systems of the three languages.

Dutch and French have articles both for definite and for indefinite singular nouns. In Dutch the definite article is *de* with common singular nouns and *het* with neuter singular nouns. The indefinite article *een* is used with both singular common and singular neuter nouns, see table 1. In French a distinction is made between masculine and feminine singular nouns. This distinction is expressed both by the definite article (*le, la*) and by the indefinite article (*un, une*), see table 2:

Dutch articles	definite	indefinite
neuter singular nouns	het	een
non-neuter singular nouns	de	een

Table 1: Dutch article system

French articles	definite	indefinite
masculine singular nouns	le	un
feminine singular nouns	la	une

Table 2: French article system

In Arabic, the definite article *él* precedes the noun and does not share gender and number features with the noun. The *l* of *él* can assimilate with the consonant that follows. In Standard Modern Arabic indefinites bear the morphological marker *n* known as Nunation (*Tanwin*):

Arabic articles	definite	indefinite
singular nouns	él	-n

Table 3: Arabic article system

Dutch, French, and Arabic are definiteness-based languages. In these languages articles lexicalize the distinction [\pm definite] and not the distinction [\pm specific], as the examples (1-3), based on Ionin et al.'s (2004) test sentences, illustrate:

(1) [-Definite, +Specific] (Dutch)

In a course

A: *Meneer Bakker, gaan we met de toets beginnen?*
 'Mr Bakker, can we start the exam?'

B: *Nee, ik wacht op een student. Hij zei me dat hij wat later zou komen.*
 'No, I am waiting for a student. He told me he would be late.'

(2) [+Definite, -Specific] (French)

At the hairdresser's

A: *Bonjour madame. Je voudrais parler avec le coiffeur de mon fils,*
 good morning, madam. I would like to speak with the hairdresser of my son,
mais je ne sais pas qui c'est. Pourriez-vous m'aider?
 but I NEG know neg who it is. Could you me help

B: *Oui, bien sûr.*
 yes, of course

(3) [-Definite, +Specific] (Arabic):

In a shop

- A: *Hél tabhathin-a 3én chayi-n ya sayidati*
 Do search of thing oh madam
- B: *Na3ém, inani abhathu 3én Øhakibat-I-n sawda-a taraktouha houn*
 Yes am I search of Ø bag-a black left-it there
- A: ‘Are you searching for something, madam?’
- B: Yes, I am searching for a black bag that I left here.’

Within a parametric approach to the acquisition of determiners, there are two options: either the parameter setting is transferred from L1, or there is fluctuation until the parameter is set. If L2 learners transfer the parameter setting from their L1, we predict that they should make a definiteness-based choice in L2, as in (1-3). Otherwise they should fluctuate between the two parameter-settings: definiteness and specificity. In some cases they should lexicalize the definiteness distinction, in other cases they should lexicalize the specificity distinction. In this latter case they are expected to make use of one article, probably the definite one, to express specificity, and the other, probably the indefinite one, to express non-specificity. In (1) and (3) they would use the definite article, and in (2) the indefinite one.

To investigate whether learners of a definiteness-based language transfer or fluctuate, we tested two learner populations using a forced choice paradigm and test sentences embedded in naturalistic dialogues such as in (1-3) in French, in which there was a blank space that the learners had to fill in with an article. We present our results in the next subsection.

3.2. The studies and the results

In this section we present the two experiments and the results.

3.2.1. Study 1: Dutch learners of French L2

In study 1 we investigated the acquisition by Dutch L2 learners of French, both definiteness-based languages, to see whether their interlanguages presented specificity effects (see section 3.1 for the (singular) article systems of Dutch and French). Our subject population was composed of 23 high-school Dutch learners of French L2, aged 13 to 15, who had had 200 hours of French in class instruction. All the learners were native speakers of Dutch.

Our experimental design reproduced that of Ionin et al. (2004). A written forced-choice elicitation task consisting of twelve dialogues in French varying in definiteness and specificity was designed. An example dialogue in French is provided in (2). Three token examples of each context were presented in a randomized order. Learners completed the target sentence with a missing article (or a blank). They chose either the definite article *le/la* or the indefinite article *un/une*, basing their choice on the context. All the target DPs used were singular.

The results of this study are shown in table 4 below:

	+Definite		-Definite	
	Incorrect Un/une	Correct Le/la	Incorrect Le/la	Correct Un/une
+Specific	13%	87%	68%	32%
-Specific	45%	55%	23%	77%

Table 4: article choice in French by Dutch adolescents

Table 4 shows that in [+definite, +specific] and [-definite, -specific] contexts, the percentage of incorrect article choice is lower than in contexts in which definiteness and specificity do not match. This means that article errors do not occur at random. A paired t-test showed that the difference is significant. There is a significant difference in frequency of incorrect choice between [+def, +spec] contexts (13%) and [+def, -spec] contexts (45%), ($t(22) = -4,14$, $p < .001$). This means that Dutch learners of L2 French overused the indefinite article *un* significantly more in [-specific] definite contexts. Similarly, the incorrect article choice difference is significant between [-def, +spec] contexts

(68%) and [-def, -spec] contexts (23%), ($t(22) = -3,94$, $p = .001$). This means that the Dutch learners of L2 French overused the definite article *le* significantly more in indefinite [+specific] contexts. These results show that specificity is clearly a factor that influenced article choice for Dutch L2 learners of French. In this respect, the results obtained here are comparable to the ones Ionin et al. (2004) obtained for L2 learners of English with article-less L1. Consequently, these data show that Dutch learners of French fluctuate in their choice of articles in a way comparable to learners who do not have an article-based L1. Since Dutch is a language whose article system lexicalizes a definiteness distinction, the results show that the L1 parameter-setting of these learners did not reduce the effect of specificity on their L2 article acquisition. From the point of view of the parametric approach of Ionin et al. (2004), these results are unexpected. Since the L1 parameter of Dutch learners is set for a definiteness-based language, the influence of specificity on their L2 acquisition of the French determiners is clearly unexpected. If specificity effects are evidence of recourse to UG, then these results indicate that for these Dutch learners the influence of a UG choice superseded their L1 parameter, causing an increase in incorrect use that is contrary to possible L1 transfer influence. These results, which show that there is a specificity effect in the choice of the French article by Dutch L1 adolescent learners, reinforce previous comparable results that were obtained in our study of the acquisition by beginning Dutch adult learners of L2 Arabic determiners (Guella, Deprez & Sleeman 2008).

3.2.2. Study 2: Arabic learners of L2 French

In our second study we tested Arabic L2 learners of French (age: 10 and 12 years). There were 30 beginners (10 years) and 20 advanced learners (12 years). The beginners had had 64 hours of French, whereas the advanced learners had had 280 hours of French. Arabic is a definiteness-based language, just like French. In Arabic definiteness is lexicalized with definite singular nouns by the article *él*, whereas indefiniteness is expressed by the suffix *-n* on the noun. We used again a forced choice test: the subjects were asked to choose either the French article *le/la* ‘the’ or *un/une* ‘a’. There were 16 dialogues in French: 12 contexts with the extension [\pm definite, \pm specific], with 3 examples of each context in a randomized presentation. In addition there were 4 fillers.

	+Definite		-Definite	
	Incorrect Un/une	Correct Le/la	Incorrect Le/la	Correct Un/une
+Specific	21%	79%	54%	46%
-Specific	63%	37%	20%	80%

Table 5: overall results for the 50 children

The overall results show again that errors are more frequent when specificity is inversely valued to definiteness, which shows that the children fluctuated in their choice of the article between a definiteness-based choice and a specificity-based choice, in the same way as the L2 learners of English with an article-less L1 did. This is again unexpected, since both Arabic and French are definiteness-based languages. A paired t-test showed again that the difference is significant. There is a significant difference in frequency of incorrect choice between [+def, +spec] contexts (21%) and [+def, -spec] contexts (63%), ($t(49) = -9,35$, $p < .001$). Similarly, the incorrect article choice difference is significant between [-def, +spec] contexts (54%) and [-def, -spec] contexts (20%), ($t(49) = -7,21$, $p < .001$). The results show that the L1 parameter setting did not reduce the effect of specificity on L2 article acquisition in the Arabic children.

In the next section we show that the results differ for the two groups of children (10 year old: 64 hours of French, and 12 year old: 280 hours of French), which suggests that there is a proficiency effect.

4. Proficiency effects

In tables 6 and 7 the group results for the 10 year old and the 12 year old Arabic learners of French are presented:

	+Definite		-Definite	
	Incorrect Un/une	Correct Le/la	Incorrect Le/la	Correct Un/une
+Specific	22%	78%	73%	27%
-Specific	76%	24%	27%	73%

Table 6: Results 10-year-olds: 64 hours of French (30 children)

	+Definite		-Definite	
	Incorrect Un/une	Correct Le/la	Incorrect Le/la	Correct Un/une
+Specific	20%	80%	25%	75%
-Specific	43%	57%	10%	90%

Table 7: Results 12-year-olds: 280 hours of French (20 children)

A paired t-test showed that both for the 10-year-olds and for the 12-year-olds the difference is significant. For the 10-year-olds, there is a significant difference in frequency of incorrect choice between [+def, +spec] contexts (22%) and [+def, -spec] contexts (76%), ($t(29) = -10,77, p < .001$). Similarly, the incorrect article choice difference is significant between [-def, +spec] contexts (73%) and [-def, -spec] contexts (27%), ($t(29) = -8,23, p < .001$). For the 12-year-olds, there is also a significant difference in frequency of incorrect choice between [+def, +spec] contexts (20%) and [+def, -spec] contexts (43%), ($t(19) = -3,62, p = .002$). Similarly, the incorrect article choice difference is significant between [-def, +spec] contexts (25%) and [-def, -spec] contexts (10%), ($t(19) = -2,44, p = .025$).

Tables 6 and 7 show that both groups of children show specificity effects, but that the error rate in the [+def, -spec] and [-def, +spec] contexts is much higher for the 10-year-olds (around 70%) than for the 12-year-olds (around 30%). This suggests that there is a proficiency effect. The specificity effects become less apparent when age and proficiency increase. It is however interesting to observe that despite an overall decrease of errors in all categories, i.e. 12 year old children make fewer errors generally, the rate of errors in categories with inversed specificity and definiteness value remain larger than in categories where definiteness and specificity correlate in value. A two-way repeated measures ANOVA showed that there is a proficiency effect. There is a significant main effect when the target was the definite article, $F(1, 48) = 91.2, p < .001$, and also a significant interaction, $F(1, 295) = 48, p < .001$. When the target was the indefinite article, there is also a significant main effect, $F(1, 48) = 51.67, p < .001$, and a significant interaction, $F(1, 210) = 48, p < .001$.

That specificity effects decrease with increasing proficiency has also been suggested in other studies. Zdorenko & Paradis (2008) investigate the L2 acquisition of English articles by children from a number of article-based and article-less L1s. The data for Zdorenko & Paradis' (2008) study consisted of a longitudinal corpus of narratives (over two years) from 17 English L2 children, mean age of 5;4 years at the age of onset. The children, learning English as their L2, had L1s that do not have definite/indefinite articles (Chinese, Korean and Japanese) or L1s that do have article systems (Spanish, Romanian, and Arabic). The results show that all children substituted *the* for *a* in indefinite specific contexts (i.e. showed fluctuation) regardless of their L1 background. The results also showed that the specificity effects diminish over time, especially for the children with a [+article] background.

Ko, Ionin & Wexler (2009) report that L1 Serbo-Croatian learners of L2 English tested with the same materials as in Ionin et al. (2004) did not manifest specificity-based errors, although Serbo-Croatian is an article-less language comparable to Russian. Since the L1 Serbo-Croatian subjects were more proficient at the L2 than the L1 Russians tested in Ionin et al. (2004), this suggests that proficiency and not type of L1 matters for specificity effects.

These findings go along with ours. We also found proficiency to be associated with a diminution of specificity-based errors in (older) Arabic children.

In this paper we have shown results that suggest that L2 learners with a definite-based article system in their L1 do not transfer their L1 article system. Zdorenko & Paradis (2008) also show this for young L2 children. They argue that it is perhaps not surprising that for their L2 learners with [+article] L1s, fluctuation overrode L1 transfer instead of the other way around, because for their young L2

learners (mean age 5.4 years), it is conceivable that access to Universal Grammar to establish a new, language-specific grammar for the target input could be more efficient than it is for older L2 learners who rely more on transfer from their L1 for a longer period of time. In this paper we showed, however, that even for (beginning) learners who were significantly older than the child L2 learners in Zdorenko & Paradis' study fluctuation also overrode transfer. In the next section we discuss why this should be so.

5. Discussion

In this paper we have provided results that show that specificity-based overuse errors occur for the L2 acquisition of one definiteness-based language, namely French. We also show that these errors appear to be subject to proficiency effects. Specifically, the more proficient the learner, the less frequent the errors. In other words, our results suggest that specificity-based errors are more frequent with beginners. This is surprising from the point of view of a parameter setting account. If L1 constitutes the initial stage of L2 acquisition, as presumed in many generative accounts, then the transfer of the L1 article system should supersede and this, particularly in the beginning stages.

An article-choice parametric account predicts that L2 learners transfer the parameter setting from their L1. The data presented in this paper, however, do not support an article choice parametric account. We have shown that there is no clear evidence for transfer. Although this does not directly contradict a UG-based Article Choice parametric account, on the basis of our studies, UG must be assumed to override L1 transfer even in adolescents and adult beginners. Since most current parametric models of L2 acquisition take the initial stage of L2 acquisition to be equal to L1 parameter setting, this is unexpected. Transfer should override UG whenever possible. Yet this is not what we observed. This raises problems for the parametric account. Unexplained on this account are the following issues:

- 1) Why should access to UG access prevail over L1 transfer even in adult beginners?
- 2) Why should specificity prevail over a definiteness-based system?

While 1) is linked to a parametric view, 2) arises in any model, raising question 3):

- 3) Could specificity be more "basic" than definiteness? If so, in what sense and why?

In what follows, we explore a distinct account of the specificity-based errors in L2 and L1 acquisition, viz. one that takes into account a computational approach to egocentricity.

5.1. A computational approach to egocentricity

In this section we suggest that egocentricity can account for L2 specificity-based errors. First let us note that the notion of specificity used in Ionin et al.'s study is consistent with an egocentricity account. Since specificity as defined by Ionin et al. is speaker-centered, an egocentricity-based account could predict that it prevails over common-ground centered definiteness, independently of L1 or L2.

Under the particular choice of the definitions adopted in our studies, as well as in Zdorenko & Paradis (2008), following Heim (1982) and Ionin et al. (2004), specificity is speaker-only oriented, while definiteness is based on common ground:

(4)

If a Determiner Phrase (DP) of the form [D NP] is

- a. [+definite], then **the speaker and hearer** presuppose the existence of a unique individual in the set denoted by the NP.
- b. [+specific], then the **speaker** intends to refer to a unique individual in the set denoted by the NP and considers this individual to possess some noteworthy property.

Pragmatically, this means that while specificity involves an egocentric perspective based on a speaker-only frame of reference, definiteness involves common ground and perspective sharing. This suggests that the egocentricity account could have something to say. Egocentricity has been argued to explain L1 acquisition errors, but Ko et al. (2010) reject it for adult L2 acquisition as they view egocentricity as a

maturational limitation irrelevant for adults. However, experimental results have not confirmed this view.

Horton et al. (1996) show that adults do not take into account common ground, i.e. behave egocentrically, when they are under time pressure. Epley et al. (2004) further show that egocentric perspective taking is not a maturational limitation but a computational limitation. Their results build on Keysar et al.'s (2000) study whose design used a 4x4 array of slots containing objects and asks subjects to move objects following the request of a director (e.g., move the candle up) who does not have the same visual access to the objects. When moving objects, subjects are explicitly instructed to take into account which objects the director cannot see. The results suggest that even when subjects clearly know that information is not accessible to the director, they use an egocentric interpretation strategy.

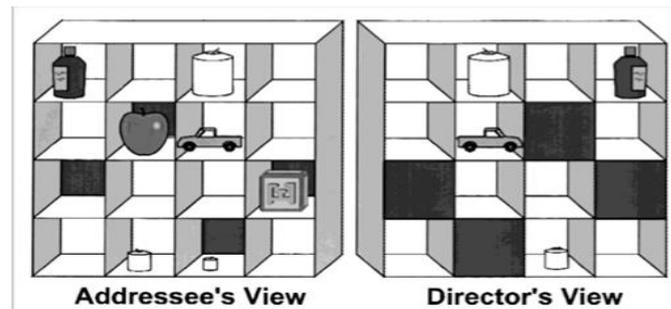


Fig. 1. Array of objects, including both occluded and mutually observable objects, from the participant's and director's perspective (from Keysar et al. 2000)

Could egocentricity also account for L2 specificity-based errors? We suggest that it can, provided it is reinterpreted as a computational, not maturational, limitation, following Epley et al. (2004). If the use of an L2 taxes the computational system of adults, especially beginners, this could be sufficient to explain why egocentricity-based mistakes should increase. Under this view, it is possible that the use of L2 slants determiner use towards an egocentric perspective. This would account for the specificity errors, especially in beginners' L2.

Experiments showing egocentric perspective for L2 speakers have not yet been run. In future research we will run Keysar style experiments with a number of L2 learners with distinct L1s to determine whether egocentricity indeed affects L2 communication. Furthermore, we intend to confirm the proficiency effect of specificity-based errors by comparing cleanly selected adult proficiency groups with different L1s.

6. Conclusion

In this paper we have shown that adolescent L2 learners show specificity effects, even if they can transfer the article system from their L1. Instead of a semantic account, as in Ionin et al. (2004), we have proposed a pragmatic account, as did Maratsos (1974, 1976) for article mistakes in children's productions. On the basis of Horton et al. (1996) and Keysar et al. (2000), we have shown that adults can be egocentric in communication, i.e. do not always take their interlocutor's knowledge into account. What Epley et al. (2004) demonstrate is that egocentric perspective taking is a computational issue, not a maturational one. This demonstration has two consequences:

- 1) Egocentric perspective taking effects are expected in adults if computational capacities are taxed. On this view, egocentricity effects are expected for L2, given the rather well-accepted assumption that the processing of an L2 is computationally more taxing than that of an L1.
- 2) Proficiency effects such as those found by Ko et al. (2009) and in study 2 are expected on a computational egocentricity-based account for specificity errors: the more proficient the L2 speakers, the less computationally taxing it is to process the L2. Consequently, under a computationally-based egocentricity account, proficiency, but not L1, is expected to play a role in specificity-based errors.

A computational egocentric account of these effects could explain both. Note that this account, rather than a rebuttal of Ionin et al.'s results, means rather to offer a deeper, i.e. cognitive rather than linguistic proper, explanation of the effects they discovered, as it roots the fine grained semantic distinction their work unearthed in a computational distinction. The work here only considers the specificity effects, not what Ionin et al. distinguish as the partitivity effects. The question of whether this type of error requires access to linguistic semantic features or is amenable to a comparable pragmatic account remains open.

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