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Title: “Article semantics in L2-acquisition: the role of specificity”

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Abstract: “Article semantics in L2-acquisition: the role of specificity”

This paper examines article choice in the L2-English of adult speakers of Russian and Korean, languages with no articles. These learners’ article use is examined in light of the *Article Choice Parameter*. It is proposed, on the basis of cross-linguistic data, that this parameter determines whether articles encode the feature [+definite] or [+specific], where the definition of *specificity* is built upon Fodor and Sag’s (1982) view of specificity as *speaker intent to refer*.

It is hypothesized that, in the absence of L1-transfer, L2-learners have access to both settings of the Article Choice Parameter, and should therefore fluctuate between distinguishing English articles on the basis of definiteness vs. on the basis of specificity. This *Fluctuation Hypothesis* is confirmed by the results of an elicitation task and a production task with L2-English learners. It is concluded that L2-learners have direct access to universal semantic distinctions, including those not instantiated in their L1.

Article semantics in L2-acquisition: the role of specificity

1. Introduction

Studies of second language (L2) acquisition have often addressed the issue of parameter setting among L2-learners. Much work has been done on the setting of syntactic parameters in L2-acquisition – e.g., the verb-raising parameter (see White 1990/91, among others), the V2-parameter (see Robertson and Sorace 1999, among others), and the Governing Category parameter (see Finer and Broselow 1986, among others). A major question addressed by these studies concerns L2-learners' ability to acquire parameter values that are not present in their L1. In this paper, we will examine L2-learners' ability to acquire a new value for a *semantic* parameter – the *Article Choice Parameter*.

In order to do this, we will first establish the settings of this parameter. Examining the behavior of articles in English and Samoan, we will argue that there is parametric variation in the lexical specifications of articles: we will propose that articles cross-linguistically can encode the feature [+definite] or the feature [+specific]. We will then investigate the role that these features play in the acquisition of English articles by adult speakers of article-less languages, Russian and Korean. We will present elicitation and production data to show that L2-learners have access to both of settings of the Article Choice Parameter. We will show that access to the feature [+specific] cannot be accounted for by either L1-transfer or L2-input, and will argue that our findings present evidence for direct access to universal semantic distinctions in L2-acquisition.

1.1. Article misuse in L2-English

There have been a number of studies concerning article choice in L2-English (see Huebner 1983; Master 1987; Parrish 1987; Thomas 1989a; Young 1996; Murphy 1997; Robertson 2000; and Leung 2001, among others). Previous studies have typically detected two types of errors: *article omission* and *article substitution*. With regards to the latter, many studies (e.g., Huebner 1983, Master 1987, Parrish 1987 and Thomas 1989a) have found that L2-English overused the definite article *the* in contexts where the indefinite article *a* was required. (One exception was the study of Leung 2001, which found high overuse of *a* in definite contexts). As an illustration of this error type, consider the examples in (1) and (2), which are extracts from written production data that we have collected from adult L1-Russian and L1-Korean speakers, respectively¹. In all of the sentences in (1) and (2), the referent of the underlined DP has not been previously mentioned, so the correct article is *a*; nevertheless, L2-learners used *the* in these contexts. Each sample of L2-writing below is followed by a more native-like paraphrase in brackets, for ease of reading.

- (1) a. When I was living in Ulan-Ude yet unmarried my friends presented me the small seamese kitten.

[Paraphrase: When I lived in Ulan-Ude still unmarried, my friends gave me a small Siamese kitten]

- b. I lost the health tooth, and I have realized after some time how it was valuable for me. It happened unexpectedly – I bit off the solid sweet and that’s all: my nice – facial! – tooth was fractured.

[Paraphrase: I lost a healthy tooth, and I have since then realized how valuable it

was for me. This happened unexpectedly: I bit off a solid sweet and that was it: my nice facial tooth was fractured.]

- (2) a. When he gave me the bible, he attached the memo which was written about the his love about me.

[Paraphrase: When he [the narrator's husband] gave me the bible, he attached a memo on which was written some text about his love for me].

- b. The most valuable object that I have received is the ball and the signature of the famous baseball player is signed on it.

[Paraphrase: The most valuable object that I have received is a ball: the signature of a famous baseball player is signed on it.]

In this paper, we will show that overuse of *the* with indefinites in L2-English is systematic, being tied to the occurrence of the feature [+specific]. We will furthermore show that when the feature [+specific] is absent with *definites*, L2-learners overuse *a* in place of *the*. We will thus tie together two types of errors – overuse of *the* with indefinites and overuse of *a* with definites – and trace them to the same source.

1.2. Organization of this paper

This paper is organized as follows. In Section 2, we outline the theoretical background necessary for our proposal and provide the lexical specifications of the features [+definite] and [+specific]. This section also provides evidence for the cross-linguistic significance of the feature [+specific]. Section 3 lays out our proposal for articles in L2-acquisition in terms of parameter setting. In Section 4, we report a forced-choice elicitation study which provides support for our predictions. Section 5 briefly summarizes the results of a production task which was administered as a supplement to

the elicitation task. Section 6, the concluding section, rules out an alternative explanation of our findings and discusses implications for both L1 and L2 acquisition.

2. *Theoretical background: definiteness and specificity*

Articles cross-linguistically can encode different semantic features. In this paper, we are particularly concerned with the *definiteness* and *specificity* features. While the term *specificity* has received multiple definitions in the literature, we use it throughout this paper in a very precise sense, *specificity as speaker intent to refer* (cf. Fodor and Sag 1982). The exact definition of this concept is provided in the next section.

2.1. *Definiteness and specificity: the definitions*

The features [+definite] and [+specific] are both discourse-related: they are related to the knowledge/mind state of the speaker and/or the hearer in the discourse. This is shown by the informal definitions in (3): the feature [+definite] reflects the state of knowledge of *both speaker and hearer*, while the feature [+specific] reflects the state of knowledge of *the speaker only*. In Section 2.2, we illustrate these definitions with examples from English.

(3) Definiteness and Specificity: informal definitions

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

The formal definitions on which we will build our analysis are given in (4). We are adopting the standard Fregean analysis of definites, and the standard quantificational analysis of indefinites (see Heim 1991 for a detailed discussion of these definitions). Our definition of specificity is based on Fodor and Sag's (1982) proposal concerning *speaker intent to refer*. The definition that we use involves the additional concept of *noteworthy property*, as developed in Ionin (2003b).

(4) Definiteness and Specificity: formal definitions

a) Definiteness (Fregean analysis)

[*the* ζ] ξ expresses that proposition which is

- true at index i , if there is exactly one ζ at i , and it is ξ at i ,
- false at an index i , if there is exactly one ζ at i , and it is not ξ at i ,
- truth-valueless at an index i , if there isn't exactly one ζ at i .

(from Heim 1991:9)

b) Indefinites (quantificational analysis)

A sentence of the form [*a* ζ] ξ expresses that proposition which is true if there is at least one individual which is both ζ and ξ , and false otherwise.

(from Heim 1991:26)

c) Specificity

A sentence of the form [*sp* α] ζ expresses a proposition only in those utterance contexts c where the following felicity condition is fulfilled: the speaker of c intends to refer to exactly one individual x_c in c , and there exists a property φ which the speaker considers noteworthy in c , and x_c is both α and φ in c . When this condition is fulfilled, [*sp* α] ζ expresses that proposition which is true at an

index i if x_c is ζ at i and false otherwise.

(based on Fodor and Sag 1982, with modifications: see Ionin 2003b:56)

2.2. *Definiteness and specificity in English*

In this section, we illustrate the above definitions with examples from the English article system.

2.2.1. *Definiteness in English*

The feature [+definite] receives morphological expression in the English article system through the article *the*. This is illustrated in (5). Upon the first mention of a cat, there is no presupposition that a unique cat exists, so the conditions on definiteness given in (3a) have not been met. As a result, the indefinite article *a* is used. In contrast, upon second mention of the same cat, the existence of a particular, unique cat (the one that has just been mentioned) has been established. The conditions on definiteness have been met, so *the* is used.

(5) I saw a cat. I gave the cat some milk.

Previous discourse is not always necessary for establishing uniqueness. In some cases, the uniqueness presupposition is satisfied as a result of mutual world knowledge. For instance, in order for (6) to be felicitous, it is not necessary that the speaker and hearer be talking about some salient winner. Given our world knowledge that a tournament typically has only one winner, the uniqueness presupposition is satisfied. For more discussion of the conditions on definiteness, see Heim (1991).

(6) The winner of this tournament will receive a prize.

2.2.2. *Specificity and indefinites in English*

Standard English has no marker for the [+specific] feature in its article system. It has two articles, *the* and *a*, which are used in [+definite] and [-definite] contexts, respectively, regardless of specificity. Colloquial (spoken) English, on the other hand, does have a marker of specificity: the demonstrative *this* on its indefinite referential use². This is illustrated in examples (7) and (8), from Lyons 1999 and Maclaran 1982, respectively.

(7) a. Peter intends to marry a/*this* merchant banker – even though he doesn't get on at all with her.

b. Peter intends to marry a/??*this* merchant banker – though he hasn't met one yet. (from Lyons 1999:176, ex. 51)

(8) a. John has a/*this* weird purple telephone.

b. John has a/#*this* telephone, so you can reach me there.

(from Maclaran 1982:88, ex. 85)

In (7a), the speaker is intending to refer to a particular individual: the particular individual from the set of merchant bankers whom Peter intends to marry. This individual possesses a property which, from the speaker's perspective, is noteworthy: the property *Peter does not get on at all with her*. The conditions on specificity given in (3b) have been satisfied. Note that in this case, both *a* and referential *this* are possible determiners. Contrast this with (7b), in which the speaker is not intending to refer to a particular individual: the speaker does not have any particular merchant banker in mind, and no particular merchant banker carries a property which is noteworthy from the speaker's

perspectives. The conditions on specificity have not been satisfied; while *a* is possible in this scenario, referential *this* is infelicitous.

A similar phenomenon is observed in (8): in (8a), the speaker is intending to refer to a particular telephone, which has the noteworthy property of being a weird purple telephone. In (8b), the identity of John's telephone is irrelevant, and the speaker is not intending to refer to a particular telephone. The conditions on specificity are thus satisfied in (8a) only; only in this case can referential *this* be used. As Maclaran (1982:90) put it, referential *this* "draws attention to the fact that the speaker has a particular referent in mind, about which further information may be given." As the infelicity of (8b) illustrates, it is necessary for the speaker to give some indication to the hearer of why referential *this* has been used – i.e., of why the referent under discussion is noteworthy. Thus, while use of referential *this* depends only on the speaker's (and not the hearer's) state of knowledge, the discourse will be felicitous (from the hearer's standpoint) only if some indication of the noteworthy property is given – as in (7a) and (8a)³.

We conclude that referential *this* in colloquial English bears the feature [+specific], and therefore cannot be used in [-specific] contexts. The indefinite article *a*, on the other hand, is not marked for specificity, and can therefore be used both in [+specific] indefinite contexts (the (a) cases in (7) and (8)) and in [-specific] indefinite contexts (the (b) cases in (7) and (8)). For more discussion of the nature of referential *this* see Prince 1981 and Maclaran 1982; for the relationship between *this* and *noteworthiness*, see Ionin 2003b.

2.2.3. *Specificity and definites in English*

In the previous section, we saw that the feature [+specific] can be marked by referential *this* in case of indefinites. Although referential *this* is incompatible with definites⁴, the conditions on specificity (3b) can be satisfied by definite as well as indefinite contexts (cf. the referential/attributive distinction of Donnellan 1966). This is illustrated in (9).

- (9) a. I'd like to talk to the winner of today's race – she is my best friend!
- b. I'd like to talk to the winner of today's race – whoever that is; I'm writing a story about this race for the newspaper.

In (9a), the speaker is intending to refer to a particular individual, who is the winner of today's race, and who has the noteworthy property of being the speaker's best friend. In (9b), the speaker is not intending to refer to a particular individual, but simply wants to talk to whoever happens to be the winner of today's race. Thus, the conditions on specificity are satisfied in (9a) but not in (9b). We conclude that the specificity distinction is independent of the definiteness distinction: the conditions on specificity can be satisfied, or not satisfied, in both definite and indefinite contexts (see Table 1 in Section 2.4 for a pictorial representation of this). More evidence for this view comes from articles in Samoan, discussed in Section 2.3.

2.2.4. *Specificity ≠ wide scope*

It is important to note that the feature [+specific] on our definition is not identical to wide scope. In both sentences in (10), for instance, the DP takes widest scope in the sentence; both sentences assert the existence of a particular merchant banker. Only (10a), however, has the additional property of “noteworthiness” attached to the DP, and only

this sentence licenses the use of referential *this*. On our analysis, a [+specific] DP necessarily takes widest scope over intensional verbs or modals: if the speaker intends to refer to a particular individual in the actual world, that individual must exist in the actual world. The reverse does not hold, however: a wide-scope DP can be [-specific], as illustrated by (10b). (See Fodor and Sag 1982 for more evidence that wide-scope indefinites and specific (referential) indefinites are not identical).

- (10) a. Peter intends to marry a/this merchant banker – even though he doesn't get on at all with her.
- b. Peter intends to marry a/#this merchant banker; I have no idea who it is.

Our definition of the feature [+specific] is thus crucially different from the view of specificity adopted by much L2-literature. Starting with Huebner (1983), much work on articles in L2-English (e.g., Thomas 1989a, Robertson 2000, among others) has treated specificity as essentially corresponding to *existence in the actual world*. Our view of specificity is more restrictive: it involves *speaker intent to refer* to an individual who exists in the actual world. We will show that *existence in the actual world* without *speaker intent to refer* is insufficient to account for article choice in L2-English.

2.3. *Specificity in Samoan*

The article system of Samoan provides additional evidence for the reality of the feature [+specific]. This evidence comes from the work of Mosel and Hovdhaugen (1992) (see also Lyons 1999). According to Mosel and Hovdhaugen, Samoan uses one article (*le*) with [+specific] DPs, and another article (*se*) with [-specific] DPs. As Mosel and Hovdhaugen (1992:259) state, “[t]he specific article singular *le/l*= ART indicates that

the noun phrase refers to one particular entity regardless of whether it is definite or indefinite.”

Consider (11). In (11a), the speaker is beginning to tell a story, introducing new characters who will be important later on in the story. Here, *le* is used in a [-definite, +specific] context⁵. In (11b), the story continues. The characters have been previously mentioned, and are still noteworthy, so the context is [+definite, +specific], and *the* is used in the English translation. In Samoan, however, definiteness does not play a role in article choice: all that matters is that the narrator intends to refer to a particular individual, so *le* is used. This indicates that *le* is marking the [+specific] feature, regardless of whether the context satisfies the conditions on definiteness.

(11) a. [-definite, +specific]

‘O le ulugāli’i, fānau l=a lā tama ‘o le
 PRES ART couple give birth ART=Poss3.du. child PRES ART
teine ‘o Sina
 girl PRES Sina

“There was a couple who had a child, a girl called Sina.”

(Mosel and Hovdhaugen:259, ex. 6.37)

b. [+definite, +specific]

Māsani ‘o le tamāloa e usua’i=ina lava ia.....
 used PRES ART man GENR get up early=ES EMPH 3sg
’aenonofo ‘o le fafine ma l=a=na tama i
 butstay(pl.) PRES ART woman andART=POSS=3.sg child LD
le fale

ART house

“It was the man’s practice to get up early and... while the woman stayed at home with her child.” (Mosel and Hovdhaugen:259, ex. 6:38)

Consider next the use of *se*: “[t]he nonspecific singular article *se/s*=ART(nsp.sg.) expresses the fact that the noun phrase does not refer to a particular, specified item, but to any member of the conceptual category denoted by the nucleus of the noun phrase and its adjuncts” (Mosel and Hovdhaugen 1992:261). This use of *se* is illustrated in (12a), where there is no particular coconut under discussion. It is also used in (12b), which is about “a certain lady whose identity has not been recognized by the speaker or is not of any interest to him” (Mosel and Hovdhaugen 1992:261); since the identity of the lady is irrelevant, this is arguably a case of *se* use in a [-definite, -specific] context.

(12) a. [-definite, -specific]

'Au=mai se niu!

take=DIR ART(nsp.sg.) coconut

“Bring me a coconut [no matter which one]!”

b. [-definite, -specific]

Sa fesili mai se tamaitai po=o ai l=o

PAST ask DIR ART(nsp.sg.) lady Q-PRES who ART=Poss

ma tama.

1.exc.du. father

“A lady asked us who our father was.”

(Mosel and Hovdhaugen 1992:261, ex. 6.46, 6.50)

Most of Mosel and Hovdhaugen's discussion on the use of *se* concerns indefinite contexts. However, Mosel and Hovdhaugen also have examples of use of *se* with possessive DPs, given in (13).

(13) a. [+definite, -specific]

Alu i se tou aiga e moe. Pe se
 go LD ART(nsp.sg.) 2.pl. family GENR sleep. Q ART(nsp.sg.)
tama a ai!
 boy POSS who

“Go to your family – whoever that may be – and sleep! [I wonder] whose boy you might be!” [said to a boy who is selling necklaces at night in front of a hotel]

b. [+definite, -specific]

Tapagai lava ulavale l̄=o=u pua'a po='o
 [term of abuse] EMPH troublesome ART=Poss=2.sg. pig Q=PRES
ai s̄=o=u tamā.
 who ART(nsp.sg.) father

“Oh you filthy little bastard, you pig, whoever is your father.”

(Mosel and Hovdhaugen 1992:262, ex. 6.53, 6.54)

The possessives *your family* and *your father* are obligatorily definite in English. To express the meaning that *se* contributes to the possessive phrases in (13), Mosel and Hovdhaugen insert phrases like *whoever that is* in the translation. This recalls [-specific] definites in English (cf. ex. (13b)), and suggests that the contexts in (13) are [+definite, -specific]. The examples in (12) and (13) taken together suggest that *se* is used in [-

specific] contexts, regardless of whether or not the conditions on definiteness have been met.

On the basis of the fairly limited data available, it is impossible to develop a full theory of article semantics in Samoan. However, a preliminary generalization can be made: Samoan is an example of a language which uses one article (*le*) in [+specific] environments and a different article (*se*) in [-specific] environments; definiteness is irrelevant for Samoan articles.

2.4. *The Article Choice Parameter*

The above discussion of articles in English and Samoan leads us to propose a parameter governing article choice. We give this parameter in (14)⁶. Standard English (without referential *this*) has the first setting of this parameter: it marks *the* as [+definite], uses *a* in [-definite] contexts, and does not mark any article for specificity. Samoan has the second setting: it marks *le* as [+specific], uses *se* in [-specific] contexts, and does not mark any article for definiteness.

(14) [The Article Choice Parameter](#) (for two-article languages)

[A language which has two articles distinguishes them as follows:](#)

[The Definiteness Setting:](#) Articles are distinguished on the basis of definiteness.

[The Specificity Setting:](#) Articles are distinguished on the basis of specificity.

The Article Choice Parameter thus predicts two possible patterns of article choice in *two-article* languages cross-linguistically: article grouping by definiteness, as in (standard) English and article grouping by specificity, as in Samoan. These two possibilities are represented pictorially in Table 1.

[Insert Table 1 about here]

Other options of article grouping are of course available for languages which have three or more articles. For instance, colloquial English has three articles: *the* is [+definite], referential *this* is [+specific], and *a* encodes neither definiteness nor specificity (see footnote 4 as well as Ionin 2003b, Chapter 2, for why referential *this* does not occur in [+definite] contexts).

In this paper, we are particularly concerned with English as a two-article language. It is highly unlikely that L2-learners receive enough exposure to referential *this* to incorporate it into their article system⁷ and to consider English a three-article language. Thus, we assume that L2-English learners are acquiring a language with two articles: *the* and *a*.

3. Predictions for L2-English article choice

We now turn to the role of the Article Choice Parameter in L2-English. What happens when speakers of a language which has no articles are acquiring English as their L2? How will they come to acquire English articles? Will they have access to both settings of the Article Choice Parameter, only the target (definiteness) setting, or neither? This question ties into the more general question of L2-learners' ability to set parameters⁸.

The data on parameter setting in L2-acquisition are vast and varied. There is evidence for transfer of parameter settings from the L1 (see Hulk 1991; Parodi, Schwarz and Clahsen 1997; Schwartz 1998, among others), as well evidence that L2-learners acquire the target setting without transfer (see Flynn 1987; Flynn, Foley and Lust 2000, among others). In this paper, we are particularly interested in two aspects of parameter-setting in L2-acquisition: (1) L2-learners' access to parameter settings instantiated in neither their L1 nor their L2; and (2) optional adherence to the target parameter settings.

3.1. Access to non-L1 / non-L2 parameter settings

The first of these points receives support from the domains of verb raising and reflexive-binding. In the case of verb raising, studies have found that speakers of non-verb-raising languages who are acquiring English (another language with no verb-raising) nevertheless allow short verb-raising past adverbs (see Eubank, Bischof, Huffstutler, Leek and West, 1997, on L1-Chinese learners of English; Ionin and Wexler 2002 on L1-Russian learners of English; but see Yuan 2000 for evidence that L1-English learners of Chinese do not allow verb raising). L2-learners are thus treating English as a language which, like French and Italian, allows verb-raising past adverbs (however, L2-English learners do not allow verb raising past negation – see Eubank 1993/94, Ionin and Wexler 2002 for more discussion). These findings suggest that L2-learners have access to a setting of the verb-raising parameter which comes from neither the L1 nor the L2.

Similarly, several studies which have looked at reflexive binding in L2-acquisition in light of the Governing Category Parameter (GCP) of Wexler and Manzini (1987) have found L2-learners accessing parameter settings which are driven neither by L1-transfer nor by L2-input. Finer and Broselow (1986) as well as Finer (1991) suggested that Japanese and Korean speakers acquiring English as an L2 were giving the GCP a value which was inappropriate both for their L1s and for English – but appropriate for Russian and Hindi. Similarly, Thomas (1989b, 1991) found that L1-Spanish speakers acquiring English appeared to (optionally) adopt a value for the GCP which was wrong for Spanish and English, but appropriate for Japanese.

While verb raising and reflexive binding present the clearest cases of non-L1/non-L2 parameter settings in L2-acquisition, there is suggestive evidence from other domains as

well. For instance, White (2000), reinterpreting the findings of Clahsen and Hong (1995), suggests that Korean-speaking learners of German set the null subject parameter to the value appropriate for Italian. And finally, Broselow and Finer (1991) argued that Korean and Japanese speakers learning English adopted a value for the phonological Minimal Sonority Distance parameter that is more marked than the setting in their L1s but less marked than the one required by their L2. (See White 1996 for more discussion).

Thus, while the data are limited, there is at least some evidence that L2-learners access parameter values which are instantiated in neither their L1 nor their L2, but which are possible UG options⁹.

3.2. *Optionality in parameter-setting in L2-acquisition*

Next, we will consider the issue of *optionality* in L2-acquisition. This issue has attracted attention in recent L2-literature (e.g., Eubank 1993/94, Prévost and White 2000, Sorace 2000). The type of optionality that we are particularly concerned with here is *optional adherence to parameter settings*. By this we mean cases when L2-learners' linguistic behavior seems to reflect more than one setting of some Parameter X at the same time: i.e., when during the course of the same study, learners show evidence of adherence to Setting 1 of Parameter X some of the time, to Setting 2 of Parameter X some of the time, to Setting 3 some of the time, and so on.

Some of these cases involve parameter resetting from the L1 value to the L2 value: L2-learners' behavior in such cases is neither 100% consistent with the L1 parameter setting, nor 100% consistent with the L2 parameter setting. For instance, speakers of SVO languages who are acquiring SOV languages go through a stage during which they use both SVO and SOV constructions (see Vainikka and Young-Scholten 1996:15).

Similarly, speakers of V2 languages who have acquired a non-V2 language produce sentences which exhibit V2 word orders alongside target-like sentences which do not exhibit V2 word order (Robertson and Sorace 1999). Robertson and Sorace (1999:333) also show that in a grammaticality judgment test, “the majority of learners do not make their judgments consistently in conformity with the dictates of one grammar or the other” (i.e., of either a V2 or a non-V2 grammar).

Optionality in L2-acquisition has been much discussed in the domain of verb raising. As discussed in the previous section, L2-learners sometimes raise verbs out of the VP, past adverbs (though not past negation), and sometimes leave them *in situ*. This optional verb raising past adverbs occurs when speakers of a [+verb-raising] L1 acquire a [-verb-raising] L2 (White 1990/91, 1992); when speakers of a [-verb-raising] L1 acquire a [+verb-raising] L2 (Beck 1998); and when speakers of a [-verb-raising] L1 acquire [-verb-raising] L2 (Eubank et al. 1997, Ionin and Wexler 2002)¹⁰. In the last case, learners optionally adhere to a parameter setting which allows short verb-raising, even though it is instantiated in neither their L1 nor their L2.

This kind of optional adherence does not occur across all domains of L2-acquisition. However, the fact that it does occur suggests that L2-learners may access multiple parameter settings at the same time. While most evidence for this phenomenon comes from syntactic domains, we will show that access to multiple parameter settings also occurs in the semantic domain of article choice.

3.3. *The Fluctuation Hypothesis for L2-acquisition*

Two important points emerge from the above discussion. First, as Finer and Broselow (1986) originally showed, L2-learners show evidence of accessing parameter settings that

are instantiated in neither their L1 nor their L2. Second, in some domains, L2-learners show optional adherence to parameter settings: their behavior suggests that they sometimes adopt one setting of the parameter, and sometimes another. Both findings are consistent with the view that L2-learners have full access to UG (for different views of the Full Access position for L2-acquisition, see Schwartz and Sprouse 1994, 1996; Epstein, Flynn and Martohardjono 1996, among others). We propose a single hypothesis that captures both of these findings, and call it the *Fluctuation Hypothesis (FH)*:

(15) The Fluctuation Hypothesis (FH):

- 1) L2-learners have full access to UG principles and parameter settings.
- 2) L2-learners fluctuate between different parameter settings until the input leads them to set the parameter to the appropriate value.

Under the FH, the state of L2-grammar is UG-constrained. L2-learners' errors are predicted to be non-random, but to reflect possible UG parameter settings. The FH states that errors in L2-data stem from the learners fluctuating between two or more parameter settings, some of which are not appropriate for the target language.

3.3.1. *The FH and L1-transfer*

A logical question at this point is *which* parameter settings the L2-learners fluctuate between. In those cases where the learners' L1 instantiates a particular parameter setting, it is possible that the fluctuation will be only between the L1 and L2 settings. This has been found to be the case in such domains as VP-headedness (Vainikka and Young-Scholten 1996) and the V2 phenomenon (Robertson and Sorace 1999). However, studies of such domains as verb raising (e.g., Eubank et al. 1997) and reflexive binding (e.g., Finer and Broselow 1986) have found L2-learners accessing settings which come from

neither the L1 nor the L2, despite the fact that their L1 is instantiated in a particular setting. The interaction between L1-transfer and fluctuation (i.e., what determines whether the L1-setting is given preference over the other settings) is a very interesting issue for further study. In the present study, however, we are concerned with the predictions of the FH in those cases where the learners' L1 does not instantiate *any* setting of the relevant parameter.

We propose that in these cases, L2-learners may adopt parameter settings that are instantiated in *neither* the L1 *nor* the L2 – but that may be instantiated in some third language. In the absence of L1-transfer, L2-learners should have no initial preference for one setting of a parameter over another: if they have full UG access, then they should have access to all of the possible parameter settings, until the input leads them to choose the parameter setting appropriate for their L2¹¹.

3.3.2. *The FH and L1-acquisition*

Another interesting question is whether the FH, which we propose specifically for L2-acquisition, also operates in L1-acquisition.

There is much evidence that L1-learners set parameters very early on in the course of acquisition (e.g., see Wexler 1998 on early parameter setting in the domains of word order, verb movement, and null subjects, and Snyder 2002 for early parameter setting in the domain of pied-piping and preposition stranding). At the same time, evidence from L2-acquisition (discussed earlier in this section) suggests that L2-learners do not set parameters quickly. It is possible that at least some differences between L1- and L2-acquisition are traceable to the (in)ability to set parameters, as follows. Both L1-learners and L2-learners have grammars which are constrained by UG, and thus have access to

different UG parameter settings; however, while L1-learners quickly converge on the target parameter setting, L2-learners go through a stage of fluctuation between possible parameter settings. More investigation into this question is required. For now, we leave aside L1-acquisition and concentrate on the predictions that the FH makes for L2-acquisition. We will briefly consider article choice in L1-acquisition in Section 6.3.

3.4. *Fluctuation in L2-English article choice*

We now put together the Article Choice Parameter and the Fluctuation Hypothesis, and formulate the Fluctuation Hypothesis for L2-English article choice:

- (16) The Fluctuation Hypothesis (FH) for L2-English article choice:
- a. L2-learners have full UG access to the two settings of the Article Choice Parameter in (14).
 - b. L2-learners fluctuate between the two settings of the Article Choice Parameter until the input leads them to set this parameter to the appropriate value.

In this paper, we examine the hypothesis in (16) with L2-learners whose L1s, Russian and Korean, do not have articles and do not have any other direct way of encoding definiteness or specificity¹². Thus, our results are unlikely to be influenced by transfer. We leave for further investigation the question of how L1-transfer may interact with the FH when speakers of a language with articles, such as Spanish or Samoan, acquire another language with articles, such as English. For the purposes of this paper, we are interested in whether L2-learners have access to both settings of the Article Choice Parameter *in the absence of transfer*.

The FH predicts that L2-English learners should fluctuate between the two possibilities pictured in Table 1: some of the time, they should divide articles on the basis of definiteness, and some of the time, they should divide articles on the basis of specificity. With sufficient input, the learners may succeed in setting the Article Choice Parameter to the appropriate setting for English, and divide articles on the basis of definiteness only (for some discussion of what this “sufficient input” would include, see Section 6.1.3). Here, we are concerned with what L2-English article choice looks like *before* the learners have set the parameter.

Given the picture in Table 1, the FH makes explicit predictions for L2-English article use when the learners fluctuate between the Definiteness and Specificity settings. Both settings predict that one article (e.g., *the*) should be used with specific definites, and a different article (e.g., *a*) should be used with non-specific indefinites: whichever setting the L2-learners adopt, specific definites and non-specific indefinites receive different lexical specifications.

However, the two settings in Table 1 differ as to how they group specific indefinites and non-specific definites. While the Definiteness setting groups specific indefinites with non-specific indefinites, and groups non-specific definites with specific definites, the Specificity setting does exactly the opposite. This is shown in Table 2: the two cells with striped shading are where the two settings of the Article Choice Parameter are in conflict.

[Insert Table 2 about here]

L2-learners who are in the process of fluctuation should go back and forth between using *the* and *a* on the striped areas in Table 2, while being accurate in their article use on

the two solidly shaded categories. The predictions for L2-English article choice are spelled out in Table 3.

[Insert Table 3 about here]

In earlier studies (Ionin 2003a; Ionin, Ko and Wexler 2004), we showed that L2-English learners do indeed overuse *the* on the category [-definite, +specific], while correctly using *the* in [+definite, +specific] contexts and correctly using *a* in [-definite, -specific] contexts. The fourth cell of the table, [+definite, -specific], was not tested in these studies. Testing article choice in [+definite, -specific] contexts, and comparing it to article choice in the other contexts in Table 3, was the main goal of the study reported in this paper. The present study also expanded on the previous studies by including a greater variety of item types for testing the hypothesis in (16).

4. *Elicitation study of L2-English article choice*

The predictions in Table 3 were examined in a forced-choice elicitation study with a group of L1-Russian and L1-Korean learners of English. We report the details of the study below.

4.1. *Participants*

The participants in this study were 70 adult L2-English learners: 30 L1-Russian speakers and 40 L1-Korean speakers. The characteristics of the two groups of participants are given in Table 4. The full information on each participant is given in Appendix A¹³.

[Insert Table 4 about here]

4.1.1. Language background

Most of the learners (28 of the L1-Russian speakers and all 40 of the L1-Korean speakers) had received English instruction before arriving to the U.S. However, intensive exposure to English did not begin for the learners until arrival in the U.S., and all of the L2-learners arrived in the U.S. as late adolescents or adults.

All of the Russian-speaking participants spoke Russian as their primary language but some were also fluent, or even native, in other languages: two speakers were native in Buriat (a Mongolian language) and Tatar, respectively, but had been Russian-dominant since age four; six were bilingual in Russian and another language (Ukrainian, Azeri, Turkmen, or Armenian) and were Russian-dominant; others were fluent, but non-native, in one of the various languages spoken in the former U.S.S.R. The details on individual participants' language background are given in Appendix A.

All of the Korean-speaking participants spoke Korean as their first and primary language.

4.1.2. Recruitment procedure

The L1-Russian participants included immigrants, international students and foreign workers. All of them resided in the greater Boston area at the time of the study, and were recruited through advertisement in the Russian community.

The L1-Korean participants were primarily international students and their spouses, as well as foreign workers and their spouses. All of them resided in Gainesville, FL at the time of the study and were recruited through the University of Florida.

4.1.3. *Control participants*

The forced choice elicitation task described in the next section was also administered to 14 adult L1-English controls¹⁴. All of the control participants resided in the Boston area. Most (but not all) were students at MIT.

4.2. *Tasks*

The L2-learners completed three tasks: a forced-choice elicitation task, a written production task, and the written portion of the Michigan test of L2-proficiency. The control participants completed the forced choice task only.

The Michigan test is a standard test of L2-proficiency; only the written portion, consisting of 30 multiple-choice items, was used. The test comes with a standardized scale which places L2-learners as beginner, intermediate, or advanced.

The production task administered to the learners will be discussed in Section 5. In the present section, we focus on the forced choice elicitation task.

4.2.1. *The format of the elicitation task*

The forced choice elicitation task consisted of 76 short English-language dialogues. The target sentence in each dialogue was missing an article: the learner had to choose between *a*, *the*, and the null article (--), basing his or her response on the preceding context. The choice of this format was made so as to allow the investigators maximal control over the contexts: we could control whether a given context was definite or indefinite, specific or non-specific, and could subsequently examine L2-learners' performance in all of the context types in Table 3.

All of the target DPs in the test were singular. The target item was always in object position. In all examples below, the target sentence is italicized, and the correct article is underlined¹⁵.

There were four items per context type. The number of indefinite contexts equaled the number of definite contexts. Only the context types most relevant to the predictions in Table 3 will be discussed. For a full discussion of all context types, see Ionin (2003b, Chapter 6)¹⁶.

4.2.2. *Main item types*

In order to test the predictions in Table 3, four definite and four indefinite context types were included in the test. One example of each context type is given here. All of the items are given in Appendix B.

Two definite contexts, exemplified in (17) and (18), contained [+specific] definites; the only difference between these contexts is that in (17), the definite takes scope over an intensional verb, while (18) involves no scope interactions. In both types of [+definite, +specific] contexts, the target DP was followed by a description of the individual under discussion; the felicity conditions on the use of a [+specific] DP are satisfied, since the speaker clearly considers something about the individual murderer or creator noteworthy.

(17) [+definite, +specific]: wide scope

Conversation between two police officers

Police officer Clark: I haven't seen you in a long time. You must be very busy.

Police officer Smith: Yes. Did you hear about Miss Sarah Andrews, a famous

lawyer who was murdered several weeks ago? *We are trying to find (a, the, --)*

murderer of Miss Andrews – his name is Roger Williams, and he is a well-known criminal.

- (18) [+definite, +specific]: no scope interactions, explicit speaker knowledge

Kathy: My daughter Jeannie loves that new comic strip about Super Mouse.

Elise: Well, she is in luck! *Tomorrow, I'm having lunch with (a, the, --) creator of this comic strip – he is an old friend of mine.* So I can get his autograph for Jeannie!

Two more definite contexts, (19) and (20), contained [-specific] definites. The difference between the two contexts again is scope – in (19), the definite has narrow scope with respect to the intensional verb, while in (20), there are no scope interactions. Both context types involved denial of speaker knowledge of the referent.

- (19) [+definite, -specific]: narrow scope

Conversation between a police officer and a reporter:

Reporter: Several days ago, Mr. James Peterson, a famous politician, was murdered! Are you investigating his murder?

Police officer: Yes. *We are trying to find (a, the, --) murderer of Mr. Peterson – but we still don't know who he is.*

- (20) [+definite, -specific]: no scope interactions, denial of speaker knowledge

Bill: I'm looking for Erik. Is he home?

Rick: Yes, but he's on the phone. It's an important business matter. *He is talking to (a, the, --) owner of his company!* I don't know who that person is – but I know that this conversation is important to Erik.

Four indefinite contexts served as counterparts to the four definite contexts described above. Two contexts, exemplified in (21) and (22), contained [+specific] indefinites; in (21), the indefinite takes wide scope over an intensional verb, while in (22), there are no scope interactions. The felicity condition on the use of [+specific] DPs are met in both cases.

(21) [-definite, +specific]: wide scope

phone conversation

Jeweler: Hello, this is Robertson's Jewelry. What can I do for you, ma'am? Are you looking for some new jewelry?

Client: Not quite – I heard that you also buy back people's old jewelry.

Jeweler: That is correct.

Client: *In that case, I would like to sell you (a, the, --) beautiful silver necklace. It is very valuable – it has been in my family for 100 years!*

(22) [-definite, +specific]: no scope interactions, explicit speaker knowledge

Meeting on a street

Roberta: Hi, William! It's nice to see you again. I didn't know that you were in Boston.

William: I am here for a week. *I am visiting (a, the, --) friend from college – his name is Sam Bolton, and he lives in Cambridge now.*

The two indefinite contexts exemplified in (23) and (24) contained [-specific] indefinites. The context in (23) contained a narrow-scope indefinite, and the context in (24) contained a denial of speaker knowledge.

(23) [-definite, -specific]: narrow scope*In a school*

Student: I am new in this school. This is my first day.

Teacher: Welcome! Are you going to be at the school party tonight?

Student: Yes. I'd like to get to know my classmates. *I am planning to find (a, the, --) new good friend!* I don't like being all alone.(24) [-definite, -specific]: no scope interactions, denial of speaker knowledge

Chris: I need to find your roommate Jonathan right away.

Clara: He is not here – he went to New York.

Chris: Really? In what part of New York is he staying?

Clara: I don't really know. *He is staying with (a, the, --) friend – but I have no idea who that is.* Jonathan didn't leave me any phone number or address.

The above eight contexts allowed us to test the predictions in Table 3 concerning the role of specificity with both definites and indefinites, as shown in Table 5.

[Insert Table 5 about here]

4.2.3. *Additional item types*

In addition to the main item types, we tested L2-learners on simple first-mention indefinites which include no scope interactions and no explicit statement or denial of knowledge (25), as well as on previous-mention definites (26).

First-mention indefinites in contexts such as (25) are [-specific]: the exact identity of a particular member of the set (in this case, a particular puppy) is completely irrelevant for the discourse. Use of referential *this* would in fact be infelicitous in such contexts:

since no further mention of the referent is made, the noteworthy property possessed by the referent is not conveyed (see also the discussion in Section 2.2.2).

Previous-mention definites in contexts such as (26) are obligatorily [+specific]: the identity of a particular member of the set (in this case, a particular horse) matters, since it is crucially the individual who has just been mentioned. Thus, in (26), the speaker is talking about not just any horse, but rather *the horse that grandpa saw at the animal market*. The speaker is able to state a noteworthy property which singles out this horse from the set of horses: this property is that *x is the small friendly horse that grandpa saw at the animal market*.

(25) [-definite, -specific]: first-mention indefinite

Mary: I heard that it was your son Roger's birthday last week. Did he have a good celebration?

Roger: Yes! It was great. He got lots of gifts – books, toys. *And best of all – he got (a, the, --) puppy!*

(26) [+definite, +specific]: previous-mention definite

Molly: How is your grandpa Sam's farm doing?

Tom: All right, thanks. Last summer, grandpa needed some new animals, so he went to an animal market.

Molly: Did he find any?

Tom: Yes – he found a big cow and a small, friendly horse. But he didn't have enough money for both. *In the end, he bought (a, the, --) horse.*

The two context types illustrated above thus provide us with additional examples of [-definite, -specific] and [+definite, +specific] contexts, respectively. The predictions for

article use in these contexts are spelled out in Table 6. These contexts allow us to test whether we get the same results across all [+definite, +specific] contexts, as well as across all [-definite, -specific] contexts.

[Insert Table 6 about here]

4.3. Procedure

Testing took place in a laboratory or classroom environment for all participants. Participants were tested singly or in small groups (the maximum number of participants tested in one session was ten). The investigator (who spoke the participants' L1) asked each participant to fill out a short questionnaire which collected such information as age of first exposure to English, type and length of exposure, etc. Then the investigator proceeded to administer the tests to the participant(s).

The Michigan test was always administered last, after the other tests. This was done so that the Michigan test's emphasis on grammar did not force the L2-learners into the mode of thinking about grammatical rules: the major goal of the study was to elicit the learners' intuitions about article choice, rather than test their knowledge of explicit rules¹⁷. Order of presentation of the production task and the forced choice elicitation task was counterbalanced¹⁸. The forced choice task was accompanied by a translation sheet which translated potentially unfamiliar items from English into Russian or Korean. No translation sheets were provided for the production task or the Michigan test.

Testing took place in a single session. The participants were given 90 minutes to complete the forced choice task, but the vast majority finished in 60 minutes or less. The two other tests were untimed. Most participants completed the entire testing session in

about two hours, though the more proficient L2-learners finished in 90 minutes or less. All participants were reimbursed monetarily at the end of the testing session.

4.4. Group results

This section describes the group data from the forced choice elicitation task. We briefly describe the results of the control participants before moving on to a detailed discussion of the L2-learners' performance.

4.4.1. Results: control participants

The forced choice elicitation task was administered to 14 native English speakers. These speakers performed as expected, supplying the target article in all of the context types discussed in Section 4.2, with one important exception: two of the control participants unexpectedly put *a* in one or more of the previous-mention definite contexts. We will discuss these contexts, and performance of the control participants, in more detail in Section 4.4.4¹⁹.

4.4.2. L2-learners: proficiency and language background

We now move on to the performance of the L2-learners. The distribution of the Michigan test scores was as follows: among the 30 L1-Russian speakers, there were 4 beginner, 11 intermediate, and 15 advanced L2-learners. Among the 40 L1-Korean speakers, there were 1 beginner, 6 intermediate, and 33 advanced L2-learners. For the remainder of this paper, we focus on the results of the intermediate/advanced L2-learners, excluding the beginners. The results of the beginner learners are summarized in Section 4.4.5²⁰.

The average Michigan test score was 23.38 for the L1-Russian intermediate/advanced L2-learners, and 25.51 for the L1-Korean intermediate/advanced L2-learners. The

difference in proficiency between the two groups was significant ($p < .05$). We thus evaluate the two L1 groups separately.

Within each L1 group, all participants are grouped together. In the L1-Russian group, eight out of the 26 intermediate/advanced L2-learners were bilingual in Russian and some other language, such as Ukrainian or Azeri (none of the beginners were bilingual). Bilingualism did not appear to affect performance: there were no significant differences in use of *the* or *a* on any category between the 18 monolingual Russian speakers and the 8 bilingual speakers. The bilingual speakers had, on average, slightly higher L2-proficiency than the monolingual Russian speakers, but this difference also was not significant. Thus, for the remainder of this chapter, we group all of the intermediate/advanced L1-Russian speakers together, regardless of whether they were monolingual or bilingual.

4.4.3. *Intermediate/advanced L2-learners: results on the main item types*

In this section, we look at whether L2-learners make the specificity distinction across both definites and indefinites. The predictions examined in this section are repeated in Table 7.

[Insert Table 7 about here]

4.4.3.1. *Intensional contexts*

First, we report the results for the effects of definiteness and specificity in contexts involving intensional operators (ex. (17), (19), (21), and (23)). The results are reported in Table 8 and Table 9 for L1-Russian and L1-Korean participants, respectively. Percentages of *the* and *a* use in each [\pm definite, \pm specific] category are reported; the total number of items in each of the four categories was 4.

The statistical significance in article use between two definite or two indefinite categories is marked in the cell corresponding to the [-specific] context (so for instance, in Table 8, the three stars next to “58%the” indicate that the difference in *the* use between specific and non-specific definites was highly significant)²¹.

In this table, as in all other tables in the paper, we report uses of *the* and *a* only, for ease of presentation. The percentages of article omission can be calculated by subtracting the combined percentage of article use from 100%: thus, in Table 8, article omission in the [+definite, +specific] category was $100\% - 87\% - 6\% = 7\%$. Article omission across all categories was fairly low, rarely exceeding 15% (see also footnote 27).

[Insert Table 8 about here]

[Insert Table 9 about here]

4.4.3.2. Extensional contexts

Next, we report the results for the effects of definiteness and specificity in extensional contexts (ex. (18), (20), (22), and (24)). These are reported in Table 10 and Table 11 for the L1-Russian and L1-Korean participants, respectively. Again, percentages of *the* and *a* are reported; the total number of items in each category was 4. Statistical comparisons between each two definite and each two indefinite contexts are reported.

[Insert Table 10 about here]

[Insert Table 11 about here]

4.4.3.3. All contexts combined

Next, we combine the intensional and extensional contexts given above together. The results are presented in graph form in Figure 1 (use of *the* for all L2-learners) and Figure 2 (use of *a* for all L2-learners). The numerical results are also given in Table 12 and

Table 13 for the L1-Russian and L1-Korean speakers, respectively. Percentages of *the* and *a* in each category are reported. The total number of items in each category is 8.

[Insert Figure 1 about here]

[Insert Figure 2 about here]

[Insert Table 12 about here]

[Insert Table 13 about here]

As shown by these tables and graphs, both L1-Russian and L1-Korean speakers overused *the* more with [+specific] than with [-specific] indefinites, and overused *a* more with [-specific] than with [+specific] definites. While Korean speakers were overall more accurate in their article use than Russian speakers, the patterns of performance were very similar between the two groups.

4.4.3.4. *Effects of definiteness and specificity*

In order to determine the significance of the contribution of definiteness and specificity to use of *the* vs. *a*, we performed repeated-measures ANOVAs on the use of *the* as well as on the use of *a* by category, for each language group. The results are summarized in Table 14.

[Insert Table 14 about here]

As Table 14 shows, both definiteness and specificity had highly significant effects on article use for both groups, whether use of *the* or use of *a* was measured. There was no interaction between these two factors except in the case of *the* use among L1-Korean speakers. This interaction stems from the fact that for this L1 group, the difference in *the* use between [+specific] and [-specific] definites was smaller than that between [+specific] and [-specific] indefinites; however, both differences were significant ($p <$

.001) (as were the differences in *the* use between each definite category and each indefinite category). There may be a ceiling effect with definites, since Korean speakers were overall quite accurate in their article use. Notably, no interaction was found when use of *a* was measured.

For the L1-Russian speakers, there was a further interesting effect: there was a significant inverse correlation ($r = -.47$, $p < .05$) between use of *the* with [-specific] definites and use of *the* with [+specific] indefinites; a significant inverse correlation was also present for use of *a* with [-specific] definites vs. [+specific] indefinites ($r = -.53$, $p < .01$). That is, learners who overused *the* with [+specific] indefinites were also quite likely to overuse *a* with [-specific] definites. This further shows that the two effects – overusing *the* with indefinites and overusing *a* with definites – are related, both stemming (as was predicted) from the role that specificity plays in L2-grammar.

No such inverse correlation was found for L1-Korean speakers, possibly because of the much higher accuracy rates within that group²².

4.4.3.5. *Effects of proficiency level*

Next, we looked at the effect of proficiency level (intermediate vs. advanced) on article choice within each language group. The results of repeated-measures ANOVAs with proficiency level as a between-subject variable are given in Table 15.

[Insert Table 15 about here]

As shown in Table 15, the effects of definiteness and specificity remain highly significant when level is taken into account; moreover, the interaction between these two factors for use of *the* among the Korean speakers is no longer significant (now, $p = .09$).

For the Russian speakers, proficiency level interacts with definiteness whether use of *the* or *a* is measured. This is due to the fact that intermediate L2-learners are significantly more likely to use *the* ($p < .05$)²³ and less likely to use *a* ($p < .05$) with indefinites than advanced L2-learners; conversely, advanced L2-learners are (marginally) more likely to use *the* ($p = .07$) and less likely to use *a* ($p = .09$) with definites than intermediate L2-learners. Thus, the advanced L2-learners are overall more accurate with both definites and indefinites than the intermediate L2-learners.

There is also a marginal interaction between proficiency and specificity when use of *a* is measured for L1-Russian speakers. This stems from the fact that advanced L2-learners are marginally more likely ($p = .11$) to use *a* with [+specific] DPs than intermediate L2-learners. There is in fact a very clear developmental effect for L1-Russian speakers. Advanced and intermediate L2-learners differ from each other on article use with [-specific] definites and with [+specific] indefinites. On [-specific] definites, advanced L2-learners are (marginally) more likely to use *the* ($p = .057$) and less likely to use *a* ($p = .052$). On [+specific] indefinites, advanced L2-learners are more likely to use *a* ($p < .05$) and (marginally) less likely to use *the* ($p = .07$). Thus, on the two categories where optionality of article use was predicted (the [+definite, -specific] and the [-definite, +specific] contexts), intermediate L2-learners show greater optionality than advanced L2-learners²⁴; the latter use articles more accurately. On the other hand, in the [+definite, +specific] categories and [-definite, -specific] categories, where no fluctuation was predicted, the groups did not significantly differ from each other: both used articles appropriately.

With the L1-Korean speakers, no such clear developmental effect was observed – not surprisingly, given that the group consisted overwhelmingly of advanced L2-learners (33 out of 39). There was, however, a marginal interaction of level and definiteness for L1-Korean speakers on use of *the* ($p = .08$), which stems from higher use of *the* with definites among advanced than among intermediate L2-learners (this difference is non-significant, $p = .2$).

4.4.4. *Results on additional contexts*

We now consider article use with *first-mention indefinites* and *previous-mention* definites (see Section 4.2.3).

4.4.4.1. *First-mention indefinites*

As stated in Table 6, we predicted that L2-learners should exhibit appropriate use of *a* on the category of first-mention indefinites with no explicit statement of speaker knowledge, since this category is [-definite, -specific]. We expect performance on this item type to resemble performance on the non-specific indefinite items discussed in the previous section.

Table 16 compares performance on the relevant item type (exemplified by (25)) with performance in the other indefinite contexts. As this table shows, first-mention indefinites pattern more with [-specific] than with [+specific] indefinites, as predicted. In fact, for both L1-groups, overuse of *the* with first-mention indefinites was significantly lower ($p < .001$) than overuse of *the* with either category of [+specific] indefinites, but did not differ significantly from overuse of *the* with either category of [-specific] indefinites.

[Insert Table 16 about here]

4.4.4.2. Previous-mention definites

We now look at previous-mention definites, which are obligatorily [+specific] and are therefore not expected to elicit high *a* overuse from L2-English learners, as predicted by Table 6. Table 17 compares performance on this item type with performance on other types of definites.

[Insert Table 17 about here]

The results with previous-mention definites are not as predicted: they don't quite pattern with either [+specific] or [-specific] definites. In the case of L1-Russian speakers, previous-mention definites are closer to [+specific] definites, but with noticeably higher overuse of *a*; for the L1-Korean speakers, previous-mention definites pattern more with [-specific] definites in terms of both *the* use and *a* overuse.

However, these results may be confounded: use of *a* with previous-mention definites does not necessarily indicate that L2-learners interpret the context as non-specific. Rather, L2-learners may have interpreted the context as *indefinite*, not computing the uniqueness presupposition from the previous context.

We argue that, indeed, some of the previous-mention definite contexts in the test could be construed as indefinite. As mentioned in Section 4.4.1, two of the 14 control L1-English participants sometimes put *a* rather than *the* in previous-mention definite contexts; the exact contexts are contexts #35 and #36 in Appendix B. This suggests that the L1-English speakers interpreted the context as indefinite rather than definite: uniqueness of the referent has not been sufficiently well established. For instance, in context#35 in Appendix B, repeated in (27) below, Tom's grandfather may have bought a horse *other than the one he had seen*.

(27) [+definite, +specific]: previous-mention context

Molly: How is your grandpa Sam's farm doing?

Tom: All right, thanks. Last summer, grandpa needed some new animals, so he went to an animal market.

Molly: Did he find any?

Tom: Yes – he found a big cow and a small, friendly horse. But he didn't have enough money for both. *In the end, he bought (a, the, --) horse.*

In contrast, no control participant put *a* in the other two previous-mention definite contexts (contexts #33 and #34 in Appendix B).

Let's now consider how L2-learners did on the contexts where control speakers did vs. did not put *a*. The results shown in Table 18 are rather striking: both groups of L2-learners are clearly overusing *a* much more on items where uniqueness is less likely to be computed than on items where it is more likely to be computed. The apparently high use of *a* with previous-mention definites is thus most likely due to a confound in the test.

[Insert Table 18 about here]

The logical question is whether failure to compute uniqueness can account for L2-learners' overuse of *a* with other kinds of definites: the categories of specific and non-specific definites exemplified in Section 4.2.2. Crucially, no native English speaker ever allowed *a* on any item in these categories. All of the contexts were set up so that the definite could be assumed to have only a single referent: definite descriptions such as *the murderer of x*, *the owner of x*, *the president of x*, etc., which have clearly unique referents, were used²⁵.

Importantly, the L2-learners showed rather high overuse of *a* on categories where uniqueness is absolutely obligatory: these are the categories in (28) ([+specific] definite) and (29) ([-specific] definite).

(28) [+definite, +specific]: no scope interactions

Meeting in a park

Andrew: Hi, Nora. What are you doing here in Chicago? Are you here for work?

Nora: No, for family reasons. *I am visiting (the, a, --) father of my fiancé – he is really nice, and he is paying for our wedding!*

(29) [+definite, -specific]: no scope interactions

Phone conversation

Mathilda: Hi, Sam. Is your roommate Lewis there?

Sam: No, he went to San Francisco for this week-end.

Mathilda: I see. I really need to talk to him – how can I reach him in San Francisco?

Sam: I don't know. *He is staying with (a, the, --) mother of his best friend – I'm afraid I don't know who she is, and I don't have her phone number.*

It is a safe assumption that L2-learners realize that a person can have only one father and only one mother, and would therefore not treat *the father of my fiancé* or *the mother of his best friend* as indefinites. Nevertheless, the learners often used *a* in the above contexts, as shown in Table 19^{26,27}.

[Insert Table 19 about here]

To sum up, it looks like L2-English learners are quite good at using *the* with definites which are [+specific], including previous-mention definites, but overuse *a* with definites that they consider [-specific].

4.4.5. *Results of the beginner learners*

In this section, we briefly report the results of the beginner learners. We group together the 4 L1-Russian beginners and the single L1-Korean beginner. These learners showed low accuracy in article use across all contexts. In the first-mention simple indefinite category (25), their overuse of *the* was 25%, and their use of *a* was 55%. In the previous-mention definite category (26), their use of *the* was 45%, and their overuse of *a* was 25%.

Table 20 and Table 21 give the beginners' results in the definite and indefinite contexts related to the predictions in Table 7, for intensional and extensional contexts, respectively.

[Insert Table 20 about here]

[Insert Table 21 about here]

As the results show, beginner L2-learners resembled intermediate/advanced L2-learners in overusing *the* more with [+specific] than with [-specific] indefinites, and overusing *a* more with [-specific] than with [+specific] definites. They exhibited especially great overuse of *the* with specific indefinites.

4.5. *Individual results: intermediate-advanced L2-learners*

The previous sections show that the predicted fluctuation between specifying *the* as [+definite] vs. as [+specific] takes place at group level for intermediate/advanced learners of English. However, it is important to examine individual results as well, in order to

ensure the predicted fluctuation takes place at the level of the individual learner: i.e., that the group results are not due to half the learners treating *the* as [+definite], and half the learners treating it as [+specific].

4.5.1. Possible patterns of individual article choice, under the FH

The possible patterns of article use in the framework of the Article Choice Parameter are given in (30). The FH predicts that L2-English learners will follow the pattern in (30a) or (30b), but not the pattern of (30c) or a random pattern. Individual learners should either be in the process of fluctuation (30b) or should succeed in setting the parameter to the Definiteness setting (30a). The learners are not expected to show the pattern in (30c), since the input should lead L2-learners to choose the Definiteness rather than the Specificity setting. Under our hypothesis, L2-learners should start out fluctuating between the possible parameter settings (which UG provides), until the input has informed them that English has the Definiteness setting of the Article Choice Parameter. There is no reason for them to ever prefer the Specificity setting to the Definiteness setting²⁸.

- (30) a. The Definiteness Pattern: predicted
L2-English learners correctly use *the* and *a* to mark [+definite] and [-definite] contexts, respectively.
- b. The Fluctuation Pattern: predicted
L2-English learners go back and forth between distinguishing *the* and *a* on the basis of definiteness, and distinguishing them on the basis of specificity.
- c. The Specificity Pattern: unpredicted

L2-English learners use *the* and *a* to mark [+specific] and [-specific] contexts, respectively.

4.5.2. Classification procedure

In order to test these predictions, we looked at performance on the four main context types (given in Table 7). The measure for determining the patterns of article use of individual L2-learners was the L2-learners' use of *the* out of all instances of article use in these four context types²⁹. We divided the learners into the five patterns summarized in (31). For a detailed discussion of the numerical criteria for each pattern, as well as the various subtypes of the Definiteness and Specificity patterns, see Ionin 2003b, Chapter 6.

(31) a. The Definiteness pattern: correct parameter setting

at least 75% *the* use in [+definite, +specific] contexts

less than 25% *the* overuse in [-definite, -specific] contexts

one of the following:

1) no specificity distinction with definites or indefinites OR

2) a small (<25%) specificity distinction with definites only OR

3) a small (<25%) specificity distinction with indefinites only

b. The Fluctuation pattern

at least 75% *the* use in [+definite, +specific] contexts

less than 25% *the* overuse in [-definite, -specific] contexts

evidence for a specificity distinction:

more overuse of *the* with [+specific] than with [-specific] indefinites

less use of *the* with [-specific] than with [+specific] definites

evidence for a definiteness distinction:

more use of *the* with [+specific] definites than with [+specific] indefinites
 the specificity distinction with indefinites does not exceed the specificity
 distinction with definites by more than 50% (and vice-versa)

- c. The Specificity pattern: parameter mis-setting
 - at least 75% *the* use in all [+specific] contexts
 - less than 25% *the* use in all [-specific] contexts
 - equally high use of *the* with [+specific] definites and [+specific] indefinites
- d. The Partial fluctuation pattern
 - at least 75% *the* use in [+definite, +specific] contexts
 - less than 25% *the* overuse in [-definite, -specific] contexts
 - one of the following:
 - 1) the specificity distinction is made only with definites OR
 - 2) the specificity distinction is made only with indefinites OR
 - 3) the specificity distinction is much (>50%) larger with indefinites than with definites (or vice-versa)
- e. The Miscellaneous pattern
 - Any patterns that do not fit into the above 4 categories

4.5.3. *Individual results: intermediate/advanced L2-learners*

In Figure 3, we give the numbers of L1-Russian speakers and L1-Korean speakers falling into each pattern. As shown in Figure 1, most L2-learners fall into either the Definiteness Pattern or the Fluctuation Pattern, as expected. Only two learners adopt the Specificity Pattern and relatively few learners (9) adopt the unexpected Partial Fluctuation pattern³⁰.

[Insert Figure 3 about here]

4.5.4. *Individual results: beginner learners*

As far as individual results of beginner learners are concerned, one beginner learner exhibits the Specificity Pattern; two learners exhibit a pattern resembling Fluctuation, but with high use of *the* across all categories, including [-specific] indefinites; one learner exhibits the Partial Fluctuation pattern; and one shows completely random behavior. Thus, we again see that beginner learners resemble intermediate/advanced L2-learners, but with more noise in the data.

4.6. *Discussion*

We will now discuss the predictions concerning the role of specificity with definites vs. with indefinites. The predictions are repeated in Table 22, and the actual results are summarized in Table 23.

[Insert Table 22 about here]

[Insert Table 23 about here]

4.6.1. *Group performance*

As the summary in Table 23 shows, the predictions were supported: L2-learners differentiated between [+specific] and [-specific] DPs with both definites and indefinites. This difference was more pronounced for the L1-Russian speakers than for the L1-Korean speakers. This is not very surprising, since the L1-Korean speakers were, on average, more proficient in English³¹. Crucially, despite the quantitative differences between the two L1 groups, the groups showed qualitatively similar patterns of performance: both groups overused *the* more with [+specific] than [-specific] indefinites, and overused *a* more with [-specific] than with [+specific] definites. Both groups also

used *a* appropriately with simple first-mention indefinites, which are [-specific], and used *the* appropriately with previous-mention definites, which are obligatorily [+specific] (overuse of *a* with some previous-mention definites was shown to result from a confound of the test).

These results lead us to conclude that errors of article misuse in L2-English are systematic, following from an (optional) association of *the* with the feature [+specific] rather than the feature [+definite]. The results provide evidence for L2-learners' access to the universal semantic distinctions of definiteness and specificity. The similar patterns of performance between L1-Russian speakers and L1-Korean speakers provide evidence that the (optional) association of *the* with the feature [+specific] is not attributable to L1-transfer.

4.6.2. *Comparison with previous proposals*

Next, it is important to point out that our results cannot be accounted for on the traditional view in L2-literature which views specificity simply as wide scope (see Huebner 1983, Thomas 1989a, among others). On this view, if L2-learners are associating *the* with specificity, they should overuse *the* with all wide-scope indefinites (see Thomas 1989a for a proposal along these lines). However, this was not the case, as shown below.

Consider the target sentences from two context types in our test: (32a), from the [-definite, +specific] context in (22); and (32b), from the [-definite, -specific] context in (24). The indefinite in both sentences takes wide scope by default, since no intensional or modal operators are present in the sentence – a particular friend is asserted to exist in

both cases. The “specificity = wide scope” view would predict equal degree of *the* overuse in both cases.

(32) a. [-definite, +specific]

I am visiting (a, the, --) friend from college – his name is Sam Bolton, and he lives in Cambridge now.

b. [-definite, -specific]

He is staying with (a, the, --) friend – but I have no idea who that is.

However, as we saw in the tables in Table 10 and Table 11, both L1-Russian speakers and L1-Korean speakers distinguished between these two context types: Russian speakers used *the* 37% of the time in contexts such as (32a), vs. only 9% for contexts such as (32b). For Korean speakers, the percentages of *the* overuse were 17% vs. 2%. A view that ties overuse of *the* in L2-English to wide scope cannot account for these differences. In contrast, our proposal successfully accounts for the results: the indefinite in (32a) is [+specific], since the speaker *intends to refer* to a particular friend (Sam Bolton), while the indefinite in (32b) is [-specific], since the speaker does not intend to refer to a particular friend (having no knowledge of this friend’s identity). Thus, L2-learners associate *the* with *specificity as speaker intent to refer* rather than wide scope (contra the proposal of Thomas 1989a).

4.6.3. Individual performance

Our conclusion that *specificity as speaker intent to refer* plays a role in L2-English article use is further supported by the patterns of article use at the level of individual L2-learners. As shown in Section 4.5, nearly a third (20) of the L2-learners made a four-way distinction between specific definites, non-specific definites, specific indefinites, and

non-specific indefinites: these learners showed fluctuation between the two settings of the Article Choice Parameter. Another large group (21) of the L2-learners had converged or nearly converged on the Definiteness Setting of the parameter. Only two learners incorrectly converged on the Specificity setting of the Article Choice Parameter – the setting that L2-learners are not expected to adopt based on the input.

The FH cannot account for the behavior of the nine learners who showed the Partial Fluctuation pattern – i.e., who made a much greater specificity distinction with indefinites than with definites, or vice-versa. Three of these learners made the specificity distinction only with indefinites, so one can speculate that they considered definites like *the murderer of X* to be specific even when there was denial of speaker knowledge (since *being a murderer* can be construed as noteworthy in and of itself). However, there is no independent evidence for this explanation, or for why some other learners in the Partial Fluctuation pattern made the specificity distinction with definites only. The performance of these nine learners remains a puzzle.

Finally, we saw that there was a relationship between proficiency and the ability to set the Article Choice Parameter: at least in the case of the L1-Russian speakers, advanced learners tended to be more accurate than intermediate learners in both specific indefinite and non-specific definite contexts. This evidence suggests that as proficiency increases, L2-learners are able to set the Article Choice Parameter (although many advanced learners still show fluctuation)³².

5. *Production data*

The elicitation task described in the previous sections was supplemented by a collection of production data. We discuss the production data briefly here – for a detailed description of the study, see Ionin 2003b (Chapter 7).

The goal of the production data collection was to determine whether fluctuation between two settings of the Article Choice Parameter occurs in production as well as elicitation. Unlike the elicitation task, the production task did not make it obvious to the L2-learners that their article use was being tested, and therefore allowed us to examine L2-English article use in a more naturalistic setting.

The predictions for the production data were the same as for the elicitation data, and are repeated in Table 24. In this paper, we report the predictions and results for singular contexts only³³. For a complete report of singular, plural and mass contexts in production, see Ionin 2003b (Chapter 7).

[Insert Table 24 about here]

5.1. *Methods of production data collection*

The L2-learners who took part in the elicitation study were also given a written production task.

5.1.1. *The production task*

In the production task, the learners were asked to provide written answers to five English questions. These questions are given in (33). The L2-learners were instructed to use between three and five sentences to answer each question.

- (33) a. Talk about some valuable object that you own or owned in the past: either (1) talk about something that you received as a gift, and tell about how you received

it; or (2) talk about something valuable that you lost, and tell about how you lost it.

b. Talk about the day when you first arrived in the U.S. Describe your experiences of that day – what you did, where you went, to whom you talked, etc.

c. Describe your room – talk about what objects you have in your room, and describe them.

d. Talk about what you did on one of your recent vacations (for example, winter vacation, Thanksgiving week-end, or summer vacation). Talk about where you went and what you did.

e. Imagine that you get \$1000 as a gift, and you have to spend it right away (you can't put it in the bank). Talk about how you would spend this money.

5.1.2. Coding procedure

Once the written production data had been collected from the L2-English learners, they were typed and organized into two sets: a set of narratives by L1-Russian speakers, and a set of narratives of L1-Korean speakers. A version of the each set was then created for coding by native English speakers, henceforth, *coders*.

The coding procedure was as follows. The coders were given versions of the L2-learners' narratives in which each NP was preceded by a blank, regardless of whether or not it would require an article in L1-English, and regardless of whether the L2-learner actually put in an article. Thus, whether the L2-learner used a phrase like *the book*, *a book*, or just *book*, what the coders saw was of the form “___ book”³⁴. The coders were then asked to fill in the blank with *the*, *a*, or a dash (--) when no article was required³⁵.

The rationale for this procedure was as follows: since we were interested in L2-English article use in definite vs. indefinite contexts, we needed to evaluate L2-English article choice in contexts that were *unambiguously* definite or indefinite for native English speakers. An unambiguously definite context is one in which L1-English speakers consistently put *the*. An unambiguously indefinite context is one in which L1-English speakers consistently put *a* (for singulars) or omit articles (for plurals). By asking the L1-English coders to fill in blanks with articles, we could learn which contexts are definite and which are indefinite in L1-English, and we could exclude from the count contexts which are potentially ambiguous.

Since the task of reading the narratives and inserting the appropriate article required much concentration on the part of the coders, there was a worry that once the coders became tired, they would start disregarding the context and putting in articles more or less randomly. To avoid this, we set a time limit of 40 minutes on the task, and instructed the coders to code as much as they could in 40 minutes, focusing on accuracy rather than speed. The rates of coding varied from one coder to another, so that some could code as many as 15 sets of narratives (i.e., responses from 15 L2-learners, each consisting of answers to five questions) in 40 minutes, while others got through only half as many. The ultimate goal was to have every context coded by exactly four native English speakers. This goal was achieved after 11 coders had been recruited to code the narratives of the Korean speakers, and seven coders – to code the narratives of the L1-Russian speakers³⁶.

Crucially, the coders had no idea which article the L2-learners had actually put in any of the contexts. The coders' responses were thus completely unbiased, reflecting their own intuitions of article use.

5.2. Results

Contexts in which all coders put *the* were classified as unambiguously [+definite], while contexts in which all coders put *a* were classified as unambiguously [-definite] (and singular)³⁷. Contexts on which the coders disagreed were excluded from the count. The unambiguously definite and indefinite contexts were subsequently categorized into several different types. We report only a subset of the categories here – those categories which are most relevant to the definiteness/specificity discussion. We report the results for singular count nouns only. Article use with plural and mass nouns was very similar to article use with singular count nouns, except that bare NPs were used in place of *a*.

5.2.1. Article use with singular definites

Nearly all of the definite contexts in the data were [+specific]: there were almost no definite contexts that could unambiguously be classified as involving no speaker intent to refer. As expected, *the* was used appropriately in the vast majority of contexts; there was some article omission, but almost no overuse of *a*, as shown in the table in Table 25. (Table 25 excludes some special uses of definites, such as ordinals, superlatives, and generics – see Ionin 2003b, Chapter 7 for discussion of these cases).

[Insert Table 25 about here]

Some examples of appropriate *the* use in contexts that were [+definite, +specific] are given in (34). The target DP is underlined³⁸.

- (34) a. We live in *half-basement room*. It's small, but enough for us. In the room we have full-size bed, a large dresser and smaller dresser, and 2 tables – one is for my husband and the other is mine.
- b. It was already too cold to swim, but still quite nice to enjoy the sun.

- c. I visited the New York city with my wife by my car during the winter vacation. I've just heard the fame of the great city.

The only definite DPs that can be unambiguously classified as [-specific] are those that either (1) involve an explicit denial of speaker knowledge or (2) take narrow scope with respect to an operator. There were no instances of type (1) definites in the data. There were only seven instances of narrow-scope definites (type (2) above): L1-Russian speakers had two instances of *the* use with narrow-scope definites, while L1-Korean speakers had four instances of *the* use and a single instance of *a* overuse with narrow-scope definites. The instance of *a* overuse is given in (35), where the speaker is not discussing any collection in the actual world. The other instances of *a* overuse in the data occurred in contexts that could not be unambiguously classified as [-specific].

- (35) I have a daughter, 15 month old. I keep several toys for her in my mind. So, if I got \$1000, I will buy her those toys. But unfortunately, \$1000 is not enough to buy many toys. For example, a Brio wooden train costs almost half of \$1000. It is very tough to raise a kid with a full collection that he needs.

Thus, there is almost no overuse of *a*, and no obvious link between overuse of *a* and lack of specificity in the production of definite DPs. Since there are so few instances of [+definite, -specific] instances in the data, the hypothesis that overuse of *a* is tied to lack of specificity cannot be tested.

5.2.2. Article use with singular indefinites

We divided all indefinite contexts in the data (excluding special cases such as generics and formulaic uses) into three types: wide-scope indefinites, narrow-scope indefinites, and indefinites in *there* and *have* constructions.

The rationale for this division was as follows. Wide-scope indefinites (i.e., indefinites that take widest scope over an operator, or that take widest scope by default, in the absence of any operators) can be either [+specific] or [-specific]. Consider the wide-scope indefinites in (36), where L2-learners appropriately used *a*. In (36a), the identity of the American student seems quite important to the narrator, and the indefinite is likely to be [+specific] – the speaker probably intends to refer to a particular student. In contrast, in (36b), the identity of the dog is fairly irrelevant, as is the exact nature of the warm smile; the two indefinites in this instance are likely to be [-specific]. However, there is no obvious way of telling whether a wide-scope indefinite is [+specific] or [-specific], without having access to the narrator’s thoughts. Thus, we considered all wide-scope indefinites to be “potentially [+specific]”.

- (36) a. Next day I visited UT at Austin and fortunately could meet an american student who helped me all day. I still miss her so far.
- b. In the airport one old lady with a dog greeted us with a real warm smile.

In contrast, narrow-scope indefinites such as those in (37) are obligatorily [-specific]: the speaker is not talking about a particular restaurant or a particular dinner.

- (37) I will go to a fancy restaurant with my wife and order an expensive dinner and win that I couldn’t afford.

Finally, we separated indefinites in *there* and *have* constructions from other types of indefinites. Most uses of *there* and *have* constructions occurred in response to the question in (33c) – i.e., when the learner described his or her room, as in (38). In these types of constructions, the indefinite is most likely to be [-specific]: the narrator is unlikely to be attaching particular importance to the exact identity or nature of a

particular piece of furniture, but is concerned primarily with listing the objects in his or her room³⁹.

- (38) a. There are a mirror, a desk, a computer and a bed something like that.
 b. My room has a bed, a desk, and book shelves.

To sum up, we looked at three types of indefinites: potentially [+specific] wide-scope indefinites; most likely [-specific] indefinites in *there/have* constructions; and obligatorily [-specific] narrow-scope indefinites. The results for both L1-groups are summarized in Table 26.

[Insert Table 26 about here]

As this table shows, most cases of *the* overuse occurred in wide-scope (potentially [+specific]) environments. Some of these cases of *the* overuse are exemplified in (39) (see also the examples in (1) and (2)). In these cases, the speaker is most likely intending to refer to a particular individual. All of these contexts are indefinite (there is no previous mention of the referent of the underlined DP); L1-English coders consistently put *a* in these contexts.

- (39) a. My husband met us in airport and drove us to our new home. Then we went to our neighbours house for the small party.
 b. When I was a boy, I found a mine (I mean, an armour, from the World War Two). I liked this kind of things, so I kept it initially in the secret place in our yard, and then at home.
 c. On Thanksgiving week-end we went to NY for the first time. We took the room in the New-Yorker Hotel and went outside to see the town.
 d. First I arrived in the US at the end of June. It was in New York. I have met a

lot of people. I had to stay at the long line in order to get through the custom.

e. I went to the cruise to Bahamas with my mother.

f. In New Orleans, we visited a couple of well-known places and had a traditional cusine at the restaurant in French quarter.

In contrast, there were almost no instances of *the* overuse in *there/have* constructions. There were a few unpredicted cases of *the* overuse with obligatorily [-specific] narrow-scope indefinites. Some of these problematic cases are given in (40)⁴⁰.

(40) a. If it is happen I'll spend money for the trip to California or Florida. I'm tired for winter this year.

b. And I will spend the rest of money (\$200) for my daughter. like buying her the bike and dolls.

Despite a few problematic cases, our predictions for article use with indefinites in production were largely confirmed: overuse of *the* was confined primarily to contexts that are likely to be [+specific].

5.3. Discussion

As shown in Table 27, our predictions were partially confirmed: overuse of *the* with indefinites was indeed tied to specificity in production as well as in elicitation. There were not enough [+definite, -specific] contexts in the data to enable us to test article use with definites in production.

[Insert Table 27 about here]

To sum up, the production data supplement the elicitation data by further showing that L2-learners optionally associate the article *the* either with the feature [+specific], or with the feature [+definite].

6. Conclusion

In this paper, we examined L2-English article use in light of the features [+definite] and [+specific]. We argued, on the basis of data from English and Samoan, that articles cross-linguistically can be specified for definiteness or for *specificity as speaker intent to refer*, resulting in the possible article groupings in Table 28 (for two-article languages).

[Insert Table 28 about here]

We proposed that, at least in the absence of L1-transfer, L2-English learners do not have an *a priori* reason for choosing one of the settings in Table 28 over the other. We proposed that while UG provides L2-learners with the knowledge of possible feature specifications for articles, learners do not know which specification is appropriate for English articles. They therefore fluctuate between the two possibilities in Table 28 until the input leads them to set the Article Choice Parameter to the appropriate value (the Definiteness value, in the case of English). Our predictions were supported by an elicitation study and a production study of L2-English article choice. The results of the elicitation study furthermore showed that two different errors of L2-English learners – overuse of *the* with indefinites and overuse of *a* with definites – can be traced back to the same source: the association of *the* with the feature [+specific]. Thus, we see that errors in L2-English article choice are not random but actually reflect L2-learners access to the universal semantic distinctions of *definiteness* and *specificity*.

6.1. Implications for L2-acquisition

Our findings have several implications for issues in the study of L2-acquisition. We now briefly discuss the following issues: parameter-setting in other domains; the effects of L1-transfer; and triggers for parameter-setting.

6.1.1. *Parameter-setting in other domains*

First, our results show that, in the domain of article choice, L2-learners have access to parameter settings which are not instantiated in either their L1 or their L2. This raises the question of whether similar access to parameter settings that come from neither the L1 nor the L2 exists in other domains of L2-grammar. We suggested verb raising and reflexive binding as possible candidates, but more investigation is needed. If it is found that access to non-L1 / non-L2 parameter settings occurs in some domains but not others, it is necessary to explain why this is the case.

6.1.2. *Article choice and L1-transfer*

Next, the question of transfer needs to be addressed. We have looked at article use only among those L2-learners who have no articles in their L1, and who therefore have no initial preference for one setting of the Article Choice Parameter over another. An interesting question is what would happen when speakers of a language like Spanish, which has the Definiteness setting of the Article Choice Parameter, acquire English, which has the same setting. It is possible that these learners would simply transfer the Definiteness setting from Spanish to English and correctly treat *the* as [+definite]. It is also possible that these learners would disregard the parameter setting in their L1, and behave like speakers of Russian or Korean in accessing both settings of the Article Choice Parameter. The interaction between the Fluctuation Hypothesis and L1-transfer is an interesting issue for further study.

6.1.3. *Triggers for parameter-setting*

We have argued that L2-learners go through a stage of fluctuation, in which they essentially have two competing grammars – one which treats *the* as [+definite], and one

which treats *the* as [+specific]. Again, an important question is what other domains of L2-acquisition show similar competition between two (or more) UG options. A question left unresolved by our study is what factors cause L2-learners to finally choose one option over another, and why many highly proficient L2-English learners appear to be unable to set the Article Choice Parameter.

We suggest that the triggers related to the Article Choice Parameter are particularly difficult from the standpoint of L2-acquisition because they do not arise (at least not obviously) from the syntactic configuration. Both specific and definite articles may in principle appear in the same environments – e.g., in simple SVO sentences with no intensional or modal operators or quantifiers. In order to determine whether *the* is [+definite] or [+specific], the L2-learner needs to evaluate the discourse situation and decide whether *the* is marking the presupposition of uniqueness (from the hearer’s perspective) or the existence of a noteworthy property (from the speaker’s perspective). Since definites are often specific, both hypotheses will be compatible with many situations. The learner thus also needs to pay attention to use of *a*, and note that in contexts which are [+specific] but [-definite], *the* is never used by native English speakers.

The discourse triggers related to the Article Choice Parameter are often ambiguous. For instance, suppose that an L2-learner hears someone use a phrase like *I talked to the doctor from next door this morning*. This phrase is compatible with the hypothesis that *the* is [+definite]: even if the learner has never heard of the speaker’s next-door neighbors before, it is fairly easy to accommodate the knowledge that there is a unique, salient doctor next door. The phrase is also compatible with the hypothesis that *the* is

[+specific]: the speaker may be wishing to attract attention to the identity of the doctor in question.

Suppose next that an L2-learner hears the phrase *I talked to a doctor from next door this morning*. This phrase is compatible with the hypothesis that *a* is used with indefinites: the speaker is not presupposing her listener to have knowledge of the doctor. However, this phrase is also compatible with the hypothesis that *a* is used in the absence of specificity: the speaker is simply choosing not to attach any importance to a particular doctor's identity. The same ambiguity persists across many contexts.

One might wonder then how any learner can *ever* set the Article Choice Parameter. The answer, we think, is generalization across individual instances. A single DP might be ambiguous between definite and specific or indefinite and non-specific readings. However, if the learner is consistently hearing *the* used only when the presupposition of uniqueness has been met (even when the speaker attaches no importance to the referent's identity), and consistently hearing *a* used only when the presupposition of uniqueness hasn't been met (even when the speaker attaches importance to the identity of the referent), the learner should generalize that *the* marks definiteness rather than specificity. Given the subtlety of the discourse triggers related to speaker and hearer knowledge, generalizing from them is likely to be a fairly long and difficult process. This would result in the continued fluctuation between parameter settings on the part of otherwise advanced L2-learners.

A definitive resolution of this issue requires an in-depth study of the input triggers that are related to article choice, and of how these triggers are processed by L2-learners.

For now, we tentatively suggest that generalizing from discourse-based input triggers is a problem for adult L2-English learners.

6.2. *Ruling out an alternative explanation: article use and explicit instruction*

Before we conclude, we would like to rule out an alternative explanation of our findings: the hypothesis that article errors in L2-English are due to explicit instruction. Since L2-English learners receive some classroom instruction on article use, they may formulate explicit strategies for article use – strategies that may lead them to make errors. For instance, if instruction emphasizes *the* as a marker of referents that are well-known to the speaker, L2-English learners may adopt the strategy of overusing *the* with specific indefinites. The learners' errors on this view are not traceable to UG access or mis-set parameters, as we argue, but to explicit, non-UG-based strategies.

We will now discuss what instruction L2-English learners get concerning English articles, and will argue that strategy-based explanations cannot easily account for the patterns that we see in the data.

6.2.1. *Textbook instruction on article choice*

Textbooks of English as a Second Language (ESL) generally emphasize that use of *the* requires hearer/reader knowledge as well as speaker/writer knowledge. For instance, a textbook by Azar (1993:122) advises ESL students that “A noun is definite when *both the speaker and the listener* are thinking about the same specific thing”⁴¹ – and gives examples of *the* use in this context; on the other hand, “Indefinite nouns are actual things (not symbols), but they are not specifically identified” (Azar:122).

Similarly, an L2-English textbook by Raimes (1990:58) advises that “When you are trying to decide whether to use *a* or *an*, *the*, or no article at all, one of the crucial

distinctions to make is whether the noun phrase refers to something actual and specific *for both you and your reader* either inside the text in front of you or outside it.” On the other hand, “When we refer to someone or something that will not be actual and specific *for the reader and listener*, we do not use *the*” (Raimes 1990:60). In a book for L2-English learners writing in English, Raimes (1992:86) also says that “A *specific* reference is *known by the writer and by the reader* as something unique, specific, familiar, or previously identified to the reader” and advises use of *the* in these contexts. Thus, both speaker and hearer knowledge are emphasized in the instruction on how to use *the*.

It should be noted that ESL textbooks generally devote very small sections (just a few pages) to a review of English articles, stating a few general rules for article usage and a few examples, without extensive discussion. A Russian-language textbook by Leventhal (2000), which is aimed at Russian speakers who are learning English in the U.S., similarly spends only five pages on articles. Most of these pages are devoted to such specific rules concerning articles as putting *the* before plural last names (*the Joneses*). The main distinction between *a* and *the* is discussed in just a couple of lines, as follows:

- (41) a. “A (AN) – neopredelennyj; stavit v rjad s emu podobnymi; kakoj-to odin, nekotoryj, ljuboj; v pervye upomjanutyj; odin iz gruppy podobnyx.

“THE - opredelennyj; individualiziruet; konkretnyj, izvestnyj, vot étot; ne v pervyj raz upomjanutyj; edinstvennyj v svoem rode.”

(Leventhal 2000:35)

b. *Translation*

“A (AN) - indefinite; places [the referent] in a row with others like it; an unspecified one, some, any; mentioned for the first time; one out of a group of its

kind.

“THE - definite; individualizes; specific, known, this one; previously mentioned; the only one of its kind.”

Note that Leventhal’s directives are somewhat confusing: should *the* be used when the referent has been previously mentioned, when it is known to the speaker, or both? Such terms as *specific* or *known* can be understood in a variety of ways, including *known to both speaker and listener* (as in all of the English-language textbooks cited above) and *known to the speaker only*. If the L2-learners are adopting the latter use of *specific*, using the strategy that *specific to me = the*, this could lead them to overuse *the* in specific indefinite contexts. The textbooks’ emphasis on familiarity and (in the case of Leventhal) speaker knowledge might also conceivably account for overuse of *a* with definites – if L2-learners adopt the strategy of using *the* only with referents that they are familiar with.

6.2.2. Problems with strategy-based explanations

The problem with this strategy-based explanation is that it has to explain why L2-learners prefer one strategy over others. There are in fact quite a few different strategies concerning article use suggested to L2-English learners.

For instance, Maclin (1987:59) suggests that *a(n)* is used “before an unidentified singular countable noun that is one example of its class” (as well as in some other attributive and generic contexts), while *the* is used as “reference backward to a noun already mentioned.” Maclin (1987:59) points out that *the* is also used with a noun that shows “reference forward to an identification soon to be made, often by modifiers following the noun”, giving examples such as *The dog that has been barking all day has finally stopped barking*. Note that if our L2-learners are following this advice, they

would put *the* whenever they see RC-modification or other post-modification. This would in fact explain why L2-English learners overused *the* in [-definite, +specific] contexts which contain PP post-modification (e.g., (22)). However, this strategy is not as successful in accounting for *the* overuse in [-definite, +specific] contexts with no post-modification (e.g., (21)). This strategy also cannot account for the overuse of *a* in [+definite, -specific] contexts involving post-modification, such as (19) and (20). A strategy-based explanation would have to somehow rank strategies, saying that the strategy “use *the* with specific referents” overrides the strategy “use *the* with post-modification.” And of course, there is always the strategy that *the* should be used in the “*context known to both writer and reader*” (Maclin 1987:60). The idea that one’s hearer/reader must be familiar with the referent in order for *the* to be licensed is emphasized across textbooks with more consistency than the idea that *the* is used to refer to specific objects. If L2-learners relied on textbook-taught strategies only, we would expect them to use *the* primarily in previous-mention, definite contexts. There is no *a priori* reason to think that a strategy “use *the* when the object is familiar to me” should play an important role in L2-acquisition.

Jane Dunphy, director of the English Language Studies program at the Massachusetts Institute of Technology, notes (p.c.) that L2-learners typically get little instruction in article usage except at very advanced levels, and that they are usually instructed on the importance of *previous mention* as well as of specificity and post-modification.

On a final note, there is one type of context in which L2-learners get very specific explicit instruction concerning article use: there is evidence that L2-English learners are instructed on the use of *the* with superlatives and ordinals. For instance, in one L2-

English textbook, Maclin (1987:60) lists a few rules for where *the* is used, among them “Use *the* before superlatives and ordinal numbers”, and gives corresponding examples. Similarly, Raimes (1990:59), in another textbook of L2-English, states that “When we use a superlative (*the best, the most powerful, etc.*), we always use *the*. The use of the superlative distinguishes the noun phrase and makes it actual and specific.” In fact, when we tested a subset of the L1-Russian speakers on article use with superlatives and ordinals (see Ionin 2003b, Chapter 6), we found that the learners overwhelmingly used *the* with both, regardless of whether the context was construed as [+specific] or [-specific]. When one of the L2-learners in our study was asked for feedback concerning why she put *the* in superlative contexts, her answer was that she had learned that superlatives obligatorily take *the*.

Instruction on article use with superlatives/ordinals is much clearer than instruction on any other aspect of article use: it provides learners with one clear directive (use *the* when you see a particular word form) rather than a lot of fairly vague directives (pay attention to what your listener/reader knows, and also to what is specific for you, and also to whether there is a reference forward to an identification, and also to whether the referent has been previously mentioned, etc.). Thus, superlatives/ordinals may be a domain where instruction plays a greater role in the learners’ article choice. However, even so, we found a small but significant difference in use of *the* with specific vs. non-specific superlatives (though this was not found for ordinals). Thus, even when a strategy is very clear and explicit, L2-learners’ intuitions override it to some extent: despite instruction that superlatives must take *the*, learners still differentiate superlatives (albeit to a small extent) on the basis of specificity.

6.2.3. *Summary*

To sum up, the burden of proof is on strategy-based explanations to spell out how and why the various strategies interact the way they do. Strategy-based explanations would also have to account for the finding that L2-learners who have received ESL instruction in a wide variety of institutions, in Russia, Korea, and the U.S., all appear to adopt very similar strategies – a surprising finding, considering how little space textbooks devote to English articles. As the following quote from Leventhal’s (2000) textbook suggests, textbook instruction alone is insufficient for mastery of article use (Leventhal’s quote is followed by the basic article usage rules given in (41)).

(42) a. “Možno vypisat’ massu pravil odnositel’no togo, kakoj imenno artikl’ sleduet upotrebljat’ v tom ili inom slučae, stol’ko zhe bydet isklučenij i ogovorok, no ot vsech somnenij vse ravno ne izbavit’sja. Čtoby ne ošibit’sja, nužhen očhen’ bol’šoj opyt.” (Leventhal 2000:35)

b. *Translation*

“It is possible to write out a mass of rules concerning which article, exactly, it is necessary to use in any given case, there will be as many exceptions and stipulations, but it will still not be possible to get rid of all doubts. In order to avoid making mistakes, it is necessary to have a great deal of experience.”

In the absence of any strategy-based explanation that can account for why certain strategies are preferred over others, we will assume that strategies are not responsible for the pattern of data that we find with L2-English learners.

6.3. *Article choice in L1-acquisition*

Finally, it is necessary to address articles in L1-acquisition in light of our proposal. The predictions of the Fluctuation Hypothesis for Article Choice are in principle applicable to L1 as well as L2-acquisition: we may expect children as well as adults to optionally associate *the* with the [+specific] setting as they acquire English articles. In fact, some studies of articles in child English (notably, Matthewson and Schaeffer 2000; Matthewson, Bryant and Roeper 2001) have found overuse (or over-acceptance) of *the* in contexts that could be construed as [-definite, +specific], consistent with what we found for L2-acquisition (but see these papers for explanations of child English article errors in light of a different semantic distinction, based on Matthewson's (1998, 1999) work on articles in Salish).

It is possible that child L1-learners, like adult L2-learners, take some time to set the Article Choice Parameter and undergo fluctuation between the two settings of the parameter. However, the fluctuation might not be as pronounced, or may end fairly quickly, since children have been argued to be quite good at parameter-setting (see Wexler 1998, Snyder 2002, among others; see also the discussion in Section 3.3.2).

It is also possible that child L1-learners set the Article Choice Parameter very early on in the course of acquisition and use articles appropriately from the start. Finally, it is possible that article errors in child L1-acquisition are due to a different source than article errors in adult L2-acquisition. For instance, a number of proposals (e.g., Maratsos 1976, Karmiloff-Smith 1979, Matthewson and Schaeffer 2000) have attributed errors in children's article use to psychological/pragmatic rather than linguistic factors, such as children's inability to separate their own assumptions from those of their hearers. On the

other hand, it is possible that linguistic factors other than *specificity* are at work in L1-learners' acquisition of English articles, notably, *presuppositionality* (set membership) (see Schafer and de Villiers 2000; Wexler 2003 on the data from Maratsos 1976). Presuppositionality has also been argued to play a role in DP-marking cross-linguistically – e.g., accusative Case-marking on Turkish DPs (Enç 1991; see Kelepir 2001 for more discussion). The relationship between specificity and presuppositionality in both L1 and L2 acquisition needs to be examined (see Ionin 2003b, Appendix 4, for some preliminary findings concerning the role of presuppositionality in L2-English⁴²).

Before we can draw any definite conclusions about how our proposal relates to L1-acquisition, it is necessary to conduct direct comparisons of article use between L1-learners and L2-learners. We leave the issue open for the time being.

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Appendix A: descriptions of individual participants

Table A1. L1-Russian participants

subject number	age	sex	age of first exposure to English	Length of U.S. residence (years)	Age at U.S. arrival	Michigan test score (max = 30)	Special notes
r1	46	F	12	0.08	46.55	9	
r2	19	F	10	0.08	19.13	19	fluent (non-native) in Romanian
r3	48	M	12	0.08	48.49	2	
r4	34	F	10	2.10	32.02	26	native in Buriat; Russian primary since age 4
r5	42	F	10	10.38	31.67	16	bilingual in Russian and Ukrainian
r6	39	F	11	2.79	36.49	23	
r7	48	M	38	6.56	41.66	8	
r8	54	M	15	1.73	52.32	21	lived in Israel for 10 years before coming to the U.S.
r9	21	F	10	1.38	20.48	25	
r10	35	F	12	1.75	33.53	27	fluent (non-native) in Azeri

r11	34	F	19	1.75	32.48	28	bilingual in Russian and Azeri
r12	39	F	11	0.99	38.92	15	fluent (non-native) in Ukrainian
r13	49	M	11	0.91	48.28	17	fluent (non-native) in Ukrainian
r14	30	M	12	1.50	28.62	28	
r15	27	F	10	1.25	26.26	20	
r16	36	F	10	0.68	35.99	22	bilingual in Turkmen and Russian; Russian primary
r17	33	M	33	0.59	32.48	20	
r18	26	F	8	1.53	25.10	25	native in Uzbek; Russian primary since age 4
r19	22	M	11	1.51	20.64	29	bilingual in Russian and Azeri
r20	55	M	12	0.77	55.37	27	
r21	56	M	10	0.77	55.88	22	
r22	29	M	11	0.51	29.45	30	bilingual in Russian and Armenian; Russian primary

r23	54	F	10	0.93	53.55	27	
r24	24	F	14	1.44	23.23	26	
r25	33	M	12	1.09	32.81	23	fluent in Uzbek since age 16; Russian primary
r26	34	F	10	0.76	33.70	20	somewhat fluent in Tatar
r27	24	F	10	0.60	24.39	28	bilingual in Russian and Armenian
r28	55	F	53	2.60	52.85	20	
r29	26	M	10	0.77	25.61	24	
r30	53	F	11	5.59	48.38	10	

Table A2. L1-Korean participants

subject number	age	sex	age of first exposure to English	Length of U.S. residence (years)	Age at U.S. arrival	Michigan test score (max = 30)
k1	30	M	12	0.45	30.50	27
k2	29	F	13	0.45	29.44	23
k3	27	F	10	0.53	27.07	29
k4	27	M	10	0.53	27.37	26
k5	31	M	13	1.50	30.35	27
k6	34	F	13	8.60	26.32	27
k7	31	M	12	1.53	29.54	28
k8	34	F	13	7.45	26.62	18
k9	27	F	12	0.94	26.96	5
k10	34	M	14	6.92	27.57	27
k11	31	M	13	1.46	30.51	27
k12	33	M	12	3.63	29.93	25
k13	32	M	13	3.46	28.79	26
k14	34	M	12	3.46	31.10	25
k15	33	F	10	3.13	29.93	27
k16	29	M	10	1.71	27.36	26
k17	28	F	9	2.46	25.85	26
k18	34	M	13	3.55	30.72	30

k19	27	F	12	0.13	27.39	28
k20	31	F	13	3.55	27.84	25
k21	27	M	13	1.47	26.51	19
k22	33	M	13	1.55	32.08	24
k23	38	F	14	3.47	35.08	23
k24	33	F	13	0.88	33.02	23
k25	34	M	12	5.64	28.64	26
k26	30	M	14	1.55	28.58	28
k27	32	F	13	3.55	29.11	30
k28	31	F	14	0.47	31.03	22
k29	31	F	10	1.63	29.48	28
k30	28	M	11	1.38	27.27	24
k31	32	F	13	0.63	31.40	21
k32	33	F	13	1.52	31.49	29
k33	40	M	13	7.72	32.31	22
k34	19	F	12	3.89	36.08	28
k35	26	F	12	1.72	24.50	27
k36	30	M	12	1.05	29.40	26
k37	26	F	12	0.55	25.47	24
k38	29	F	12	2.05	27.50	26
k39	28	F	10	2.47	26.44	22
k40	32	F	12	2.55	30.39	26

Appendix B: Item types from the forced-choice elicitation task

IA [+definite, +specific]

definite, wide scope, speaker knowledge

1. *Conversation between two police officers*

Police officer Clark: I haven't seen you in a long time. You must be very busy.

Police officer Smith: Yes. Did you hear about Miss Sarah Andrews, a famous lawyer who was murdered several weeks ago? We are trying to find (a, the, --) murderer of Miss Andrews – his name is Roger Williams, and he is a well-known criminal.

2. *At a bookstore*

Chris: Well, I've bought everything that I wanted. Are you ready to go?

Mike: Almost. Can you please wait a few minutes? I want to talk to (a, the, --) owner of this bookstore – she is my old friend.

3. *At the end of a chess tournament*

Laura: Are you ready to leave?

Betsy: No, not yet. First, I need to talk to (a, the, --) winner of this tournament – she is my good friend, and I want to congratulate her!

4. Eric: I really liked that book you gave for my birthday. It was very interesting!

Laura: Thanks! I like it too. I would like to meet (a, the, --) author of that book some day – I saw an interview with her on TV, and I really liked her!

IB [+definite, -specific]

definite, narrow scope, no speaker knowledge

5. *Conversation between a police officer and a reporter*

Reporter: Several days ago, Mr. James Peterson, a famous politician, was murdered! Are you investigating his murder?

Police officer: Yes. We are trying to find (a, the, --) murderer of Mr. Peterson – but we still don't know who he is.

6. *At a supermarket*

Sales clerk: May I help you, sir?

Customer: Yes! I'm very angry. I bought some meat from this store, but it is completely spoiled! I want to talk to (a, the, --) owner of this store – I don't know who he is, but I want to see him right now!

7. *After a women's running race*

Reporter: Excuse me! Can you please let me in?

Guard: What do you need?

Reporter: I am a reporter. I need to talk to (a, the, --) winner of this race – I don't know who she is, so can you please help me?

8. *At a gallery*

Sarah: Do you see that beautiful landscape painting?

Mary: Yes, it's wonderful.

Sarah: I would like to meet (a, the, --) author of that painting – unfortunately, I have no idea who it is, since the painting is not signed.

IIA [+definite, +specific]

definite, no scope interactions, speaker knowledge

9. Paul: Do you have time for lunch?

Sheila: No, I'm very busy. I am meeting with (a, the, --) president of our university – Dr. McKinley; it's an important meeting.

10. *Meeting in a park*

Andrew: Hi, Nora. What are you doing here in Chicago? Are you here for work?

Nora: No, for family reasons. I am visiting (a, the, --) father of my fiancé – he is really nice, and he is paying for our wedding!

11. Reporter 1: Guess what? I finally got an important assignment!

Reporter 2: Great! What is it?

Reporter 2: This week, I am interviewing (a, the, --) governor of Massachusetts – Mitt Romney. I'm very excited!

12. Kathy: My daughter Jeannie loves that new comic strip about Super Mouse.

Elise: Well, she is in luck! Tomorrow, I'm having lunch with (a, the, --) creator of this comic strip – he is an old friend of mine. So I can get his autograph for Jeannie!

IIB [+definite, -specific]

definite, no scope interactions, no speaker knowledge

13. Bill: I'm looking for Erik. Is he home?

Rick: Yes, but he's on the phone. It's an important business matter. He is talking to (a, the, --) owner of his company! I don't know who that person is – but I know that this conversation is important to Erik.

14. *Phone conversation*

Mathilda: Hi, Sam. Is your roommate Laurie there?

Sam: No, she went to San Francisco for this week-end.

Mathilda: I see. I really need to talk to her – how can I reach her in San Francisco?

Sam: I don't know. She is staying with (a, the, --) mother of her best friend – I'm afraid I don't know who she is, and I don't have her phone number.

15. Mike: Guess what? You remember my friend Jessie, who is a reporter?

Angela: Yes, what about her?

Mike: She has a really important job right now, with a big newspaper.

Today, she is interviewing (a, the, --) governor of Arizona! I don't remember who that is... but this is a really important assignment for Jessie!

16. Rose: Let's go out to dinner with your brother Samuel tonight.

Alex: No, he is busy. He is having dinner with (a, the, --) manager of his office – I don't know who that is, but I'm sure that Samuel can't cancel this dinner.

IIIA[-definite, +specific]

Indefinite, wide scope, speaker knowledge

17. *In an airport, in a crowd of people who are meeting arriving passengers*

Man: Excuse me, do you work here?

Security guard: Yes.

Man: In that case, perhaps you could help me. I am trying to find (a, the, --) red-haired girl; I think that she flew in on Flight 239.

18. *In a restaurant*

Waiter: Are you ready to order, sir? Or are you waiting for someone?

Client: Can you please come back in about twenty minutes? You see, I am waiting. I am planning to eat with (a, the, --) colleague from work. She will be here soon.

19. *In a "Lost and Found"*

Clerk: Can I help you? Are you looking for something you lost?

Customer: Yes... I realize you have a lot of things here, but maybe you have what I need. You see, I am looking for (a, the, --) green scarf. I think that I lost it here last week.

20. *phone conversation*

Jeweler: Hello, this is Robertson's Jewelry. What can I do for you, ma'am?
Are you looking for some new jewelry?

Client: Not quite – I heard that you also buy back people's old jewelry.

Jeweler: That is correct.

Client: In that case, I would like to sell you (a, the, --) beautiful silver necklace. It is very valuable – it has been in my family for 100 years!

IIIB [-definite, -specific]

indefinite, narrow scope, no speaker knowledge

21. *In a children's library*

Child: I'd like to get something to read, but I don't know what myself.

Librarian: Well, what are some of your interests? We have books on any subject.

Child: Well, I like all sorts of things that move – cars, trains... I know! I would like to get (a, the, --) book about airplanes! I like to read about flying!

22. *In a school*

Student: I am new in this school. This is my first day.

Teacher: Welcome! Are you going to be at the school party tonight?

Student: Yes. I'd like to get to know my classmates. I am hoping to find (a, the, --) new good friend! I don't like being all alone.

23. *In a clothing store*

Clerk: May I help you?

Customer: Yes, please! I've rummaged through every stall, without any success. I am looking for (a, the, --) warm hat. It's getting rather cold outside.

24. Sam: I'm having some difficulties with my citizenship application.

Julie: What are you going to do?

Sam: Well, I need some advice. I am trying to find (a, the, --) lawyer with lots of experience. I think that's the right thing to do.

IVA [-definite, +specific]

indefinite, no scope interactions, speaker knowledge

25. Reporter 1: Hi! I haven't seen you in weeks. Do you have time for lunch?

Reporter 2: Sorry, no. I'm busy with a story about local medicine. Today, I am interviewing (a, the, --) doctor from Bright Star Children's Hospital – he is a very famous pediatrician, and he doesn't have much time for interviews. So I should run!

26. Gary: I heard that you just started college. How do you like it?
 Melissa: It's great! My classes are very interesting.
 Gary: That's wonderful. And do you have fun outside of class?
 Melissa: Yes. In fact, today I'm having dinner with (a, the, --) girl from my class – her name is Angela, and she is really nice!

27. *Phone conversation*

- Christina: Hello, you've reached Christina Jones's office.
 Rob: Hi, Christina. This is Rob. Do you have time to talk?
 Christina: Not right now. I'm sorry, but I'm busy. I am meeting with (a, the, -) student from my English class – he needs help with his homework, and it's important.

28. *Meeting on a street*

- Roberta: Hi, William! It's nice to see you again. I didn't know that you were in Boston.
 William: I am here for a week. I am visiting (a, the, --) friend from college – his name is Sam Bolton, and he lives in Cambridge now.

IVB [-definite, -specific]

Indefinite, no scope interactions, no speaker knowledge

29. *At a university*

- Professor Clark: I'm looking for Professor Anne Peterson.
 Secretary: I'm afraid she is busy. She has office hours right now.
 Professor Clark: What is she doing?

- Secretary: She is meeting with (a, the, --) student, but I don't know who it is.
30. Karen: Where's Beth? Is she coming home for dinner?
- Anne: No. She is eating dinner with (a, the, --) colleague; she didn't tell me who it is.
31. Chris: I need to find your roommate Jonathan right away.
- Clara: He is not here – he went to New York.
- Chris: Really? In what part of New York is he staying?
- Clara: I don't really know. He is staying with (a, the, --) friend – but he didn't tell me who that is. He didn't leave me any phone number or address.
32. Gertrude: Guess what? My cousin Claudia is in Washington, D.C. this week.
- Richard: That's great. What's she doing there?
- Gertrude: She is doing some interviews for her newspaper. She is interviewing (a, the, --) politician; I'm afraid I don't know who, exactly. I'll find out when I read her article!
- VA. simple definite [+definite, +specific]
33. Vicky: Where were you yesterday? I tried to call you, but you weren't home.
- Rachel: I went to a bookstore yesterday.
- Vicky: Oh, what did you get?
- Rachel: I got lots of things – several magazines, two red pens, and an interesting new book. After I came home, I read (a, the, --) book.

34. Sarah: Yesterday, I took my granddaughter Becky for a walk in the park.
 Claudia: How did she like it?
 Sarah: She had a good time. She saw one little girl and two little boys in the park. Claudia is a little shy. But finally, she talked to (a, the, --) girl.
35. Molly: How is your grandpa Sam's farm doing?
 Tom: All right, thanks. Last summer, grandpa needed some new animals, so he went to an animal market.
 Molly: Did he find any?
 Tom: Yes – he found a big cow and a small, friendly horse. But he didn't have enough money for both. In the end, he bought (a, the, --) horse.
36. Alice: What did you do last night?
 Robin: I watched TV.
 Alice: What did you watch?
 Robin: Well, on one channel, I found an interesting German film. On another channel, I found an exciting news program. Finally, I watched (a, the, --) film.
- VB simple indefinite [-definite, -specific]
37. Judy: Last Saturday, I didn't have anywhere to go, and it was raining.
 Samantha: So what did you do?
 Judy: First, I cleaned my apartment. Then I ate lunch. And then I read (a, the, --) book.
38. Eric: My friend Tom was in his office at the university, but he really didn't want to work.
 Bill: So what did he do?

Erik: Well, he walked around my department. He had some coffee and checked his e-mail. And he talked to (a, the, --) student.

39. Mary: I heard that it was your son Roger's birthday last week. Did he have a good celebration?

Roger: Yes! It was great. He got lots of gifts – books, toys. And best of all – he got (a, the, --) puppy!

40. Tom: How was your trip to New York?

Susan: Great! I went to many museums, and ate in lots of wonderful restaurants. I also visited many friends. And I saw (a, the, --) play.

Footnotes

¹ For details on the production study, see Section 5 of this paper.

² We call this special case of *this* use “referential *this*”, to indicate that it is tied to specificity / referentiality in the sense of Fodor and Sag 1982. Maclaran 1982 terms this “presentational *this*”.

³ Furthermore, speakers tend to refer back to the noteworthy referent later on in the discourse: Prince 1981 found that 209 out of 243 instances of referential *this* (86%) introduced a referent which was referred to again within a few clauses, either explicitly or implicitly.

⁴ See Ionin 2003b (Chapter 2) for a discussion of why referential *this* is incompatible with definites. On this analysis, *the* carries a presupposition while *this* carries only a felicity condition. Since presuppositions are more informative than felicity conditions, *the* rather than *this* is used whenever the presupposition on *the* is satisfied (i.e., in all definite contexts).

⁵ To clarify: we assume that *contexts* are always specified as [\pm definite] and [\pm specific], regardless of whether or not the language has a morphological item marking definiteness or specificity. Thus, even though specificity is not marked with definites in English, definite *contexts* may still satisfy the conditions on specificity (see Section 2.2.3). Similarly, although Samoan does not mark definiteness, the conditions on definiteness (i.e., presuppositions of existence and uniqueness) may still be satisfied by a given context. The cross-linguistic variation lies in whether definiteness or specificity features receive morphological expression.

⁶ We adopt the name for this parameter from Matthewson and Schaeffer (2000); however, they give the Article Choice Parameter different specifications, namely, *speaker beliefs* (which roughly corresponds to *wide scope*) and *common ground* (which corresponds to definiteness). We do not claim that definiteness and specificity are the only properties that can be expressed by articles cross-linguistically; however, they are the only *discourse-related* features that underlie article choice. Articles in some languages can also be subject to various grammatical restrictions (see, e.g., Matthewson 1998, 1999 on articles in Salish and their relationship to scope and choice-function readings). Our concern in this paper is with how L2-English learners distinguish between the discourse-related features of *definiteness* and *specificity*, in the absence of

any grammatical restrictions on English articles. For more discussion of how discourse-related features and grammatical restrictions may interact, see Ionin 2003b, Chapter 2.

⁷ Anecdotal support for this view comes from informal responses of L1-English control participants in our studies, who were questioned about their acceptance of sentences with referential *this*. Younger (college-age) participants considered *this* a part of their dialects, while some older participants remarked that they would not use referential *this* themselves, but considered it to be a lexical item used more by younger speakers. Many participants of all ages said that referential use of *this* was “slang”.

The L2-English participants in our studies rarely went to high school or college in the U.S. (although a number of the L1-Korean participants attended graduate school here), and thus were unlikely to have much interactions with teenage and young adult populations for whom use of referential *this* is most acceptable. Finally, in classrooms, L2-learners are taught that English has two articles, *the*, and *a*, and may not even realize that *this* has an “article” use, treating all instances of *this* that they hear as demonstratives.

⁸ For the purposes of this paper, we treat the term *parameter* as essentially involving lexical specification: thus, the Article Choice Parameter that we propose governs whether a lexical item such as *the* is specified as [+definite] or [+specific]. The other parameters that we briefly discuss in this section can in principle also be phrased in terms of feature specifications: for instance, in the Minimalist framework (Chomsky 1993, 1995), the presence vs. absence of verb-raising is tied to the feature strength of functional heads.

⁹ We do not review here the views according to which L2-learners are constrained by the parameter settings of their L1, and unable to reset parameters (e.g., Schachter 1989), or lack access to UG altogether (e.g., Bley-Vroman 1989). For a detailed review of different views of UG-access and L1-transfer, see Epstein et al. 1996, among others.

¹⁰ We are not aware of studies that examined short verb raising past adverbs for L2-learners whose L1 and L2 are both [+verb raising]. However, Eubank and Beck (1998) did find verb raising *past negation* to be optional for a speaker whose L1 (Moroccan Arabic) and L2 (French) both required verb raising.

¹¹ There are domains of the grammar where learners may be expected to prefer one parameter setting over another, e.g., because of the Subset Principle. For the domain that we are considering here – article

choice – the two grammars generated by the two parameter settings are not in a subset/superset relation, and there is no *a priori* reason to consider one setting to be a default.

¹² See Ionin 2003b, Chapter 3, for more discussion of Russian and Korean, and evidence that these languages do not obligatorily encode either definiteness or specificity.

¹³ Two of the L1-Russian participants had also participated in a previous study of L2-English article choice, reported in Ionin et al. 2004. Their performance did not appear to improve noticeably between the two studies. One participant placed as intermediate in proficiency both times, and the other one scored as advanced both times. Both participants made errors in article choice both times they were tested.

¹⁴ An additional participant was excluded from the control group due to being a native speaker of Chinese rather than English. Interestingly, while highly fluent in English, this participant made some errors of *the* overuse.

¹⁵ An anonymous reviewer suggests that some of the contexts in the test sound unnatural, and wonders whether this may have affected the results. We consider this highly unlikely because (a) all of the contexts were tested with L1-English speakers; and (b) similar results were obtained from our previous studies (Ionin 2003a, Ionin et al. 2004), which contained different sets of contexts.

¹⁶ The contexts not reported here tested article use with indefinites when such factors as presence of *certain* and/or embedding under a verb of saying were introduced. These items were designed to examine which factors contribute to specificity in L2-English. These indefinite-eliciting items were balanced with definite-eliciting fillers involving proper names (e.g., *The United Kingdom*) and definite generics. A subset of the L1-Russian speakers received a version of the test in which the definite fillers were replaced by definite-eliciting items containing superlatives and ordinals. See Ionin (2003b, Ch. 6) for a detailed discussion of these item types, and for the results.

The test did not contain any fillers eliciting lexical items other than articles. The decision not to include fillers was motivated by the length of the test.

¹⁷ An anonymous reviewer notes that the use of a forced-choice elicitation task and a written production task was not conducive to testing learners' intuitions about article choice. While the forced-choice elicitation task was indeed rather explicit in testing L2-learners' article use, we feel that the production task was not as explicit, since this task did not indicate that article use was being tested.

¹⁸ Order of presentation of the forced choice vs. production tasks did not appear to influence the L2-learners' performance on the forced choice task. Of the main item types, the only category on which order of presentation made a difference for any group was specific indefinites (ex. (21), (22)): L1-Russian speakers who took the production task first overused *the* with specific indefinites significantly more than those who took the forced choice task first ($p < .05$). However, this significant effect was not replicated when use of *a* was measured, or for the L1-Korean group.

¹⁹ Additionally, two of the control participants put *the* in one of the [-definite, +specific] contexts. Since testing of L2-learners had not yet begun, the relevant item was subsequently changed. This change occurred after seven of the 14 L1-English participants had been tested. The other seven control participants were subsequently tested on the test version which included the changed item, and always put *a* in the relevant context.

On all of the other items reported in this paper, the control participants always performed as expected.

²⁰ As an anonymous reviewer points out, results of the beginner learners could provide interesting information about the initial state of L2-acquisition – in particular, whether fluctuation is already attested in the initial state. The decision to exclude beginners from the main analysis was done because of the rather difficult nature of the test. Since it is quite possible that beginner L2-learners could not fully understand the vocabulary and/or grammatical constructions in the forced choice test, their performance may be more indicative of overall difficulties with English than of particular hypotheses concerning article choice. A more sensitive measure is needed to assess article use among beginner L2-learners.

²¹ For all of the tables in this subsection: $\dagger p = .07$; $*p < .05$; $**p < .01$; $***p < .001$

For all of the tables in this subsection, the individual category comparisons were done with paired two-sample t-tests for means (two-tailed).

²² An anonymous reviewer suggests that the lack of an inverse correlation between overuse of *a* with [-specific] definites and overuse of *the* with [+specific] indefinites for L1-Korean speakers indicates lack of a relationship between these two phenomena for the L1-Korean group. If this is the case, then it is necessary to explain which factors are causing overuse of *the* with indefinites on the one hand, and overuse of *a* with definites on the other hand. A follow-up study is at present examining article use with definites and indefinites in the L2-English of L1-Korean speakers in more detail.

²³ All of the individual comparisons between intermediate and advanced L2-learners reported in this subsection were done with independent two-sample t-tests for means (two-tailed).

²⁴ This effect was observed on some but not all of the individual [+definite, -specific] and [-definite, +specific] context types (intensional vs. extensional). Thus, while L2-learners tend to exhibit less optionality as they become more proficient, this effect is not seen for all of the individual categories tested.

²⁵ There was only one item, a non-specific definite, which contained a definite description with a potentially non-unique referent: *the manager of his office* (context#16 in Appendix B). If L2-learners thought that the office in question had multiple managers, they would have treated this context as indefinite and overused *a*. However, even when this context is taken out, L2-learners still show high overuse of *a* with [-specific] definite. L1-English speakers never overused *a* in this context.

²⁶ While both groups overused *a* with the [-specific] definite *mother of his best friend*, the L1-Russian speakers, surprisingly, also overused *a* with the [+specific] definite *father of my fiancé*. Since this context was designed as [+specific], overuse of *a* was not predicted for this item. In fact, for the Russian speakers, there was more *a* overuse on this item than on any other item in the categories of specific definites. One L1-Russian participant, when asked for informal feedback after the test, explained that *father of my fiancé* just didn't seem definite: the speaker isn't giving the father's name or saying much about him, just stating that he's paying for the wedding. This participant had apparently decided that *father of my fiancé* does not require *the* in this context because there's not enough information given about the father to make him noteworthy – i.e., because the definite is not specific.

²⁷ Note that there is much article omission in these contexts. The L2-learners apparently thought that the words *mother* and *father* do not require an article, unlike other nouns. Article omission with these two items account for much of article omission in [+definite] contexts.

²⁸ One might speculate that L2-learners would choose the Specificity setting *prior* to receiving any input – i.e., that this setting is somehow a “default” setting of the parameter. However, there is no reason to consider either Specificity or Definiteness to be the default setting, since the two settings are not in a subset-superset relationship. To rule out the possibility of a default setting entirely, more testing of beginner L2-learners is necessary, with a measure that would be more appropriate to L2-learners in the initial stages of development (see also footnote 20).

²⁹ The choice to compute the proportion of *the* use across all instances of article use (excluding omission) was done in order to control for the fact that there was more article omission with definites than with indefinites, largely due to high rates of omission with definites containing *mother* and *father* (see Section 4.4.4.2).

³⁰ While as many as 13 L2-learners (including a relatively large proportion of the L1-Russian speakers) exhibit the Miscellaneous patterns, which may be deemed problematic for our hypothesis, article choice for nine of these L2-learners is in fact far from random. Five learners in the Miscellaneous pattern exhibit behavior somewhat similar to the Definiteness Pattern. These learners use *the* much more with definites than with indefinites. Their errors involve higher *the* use on one of the [-specific] categories than on the corresponding [+specific] category. Three learners in the Miscellaneous pattern show clear evidence of fluctuation. Their error is in either using *the* too much with [-specific] indefinites, or in not using it enough with [+specific] definites. One learner has 100% *the* use across all categories except [-specific] indefinites, and high *the* use on this category as well.

Only four L2-learners (two L1-Russian and two L1-Korean) show random or nearly random behavior, as follows. Three learners use *the* more with definites than with indefinites, but their use of *the* is unexpectedly low with [+specific] definites, and unexpectedly high with [-specific] definites. And one learner almost never uses *the* at all.

³¹ In a previous study (Ionin et al. 2004) we found that L1-Korean speakers were more accurate in their article use than L1-Russian speakers even when proficiency was balanced across the two groups. In that study, as in the present one, the performance patterns of the two L1 groups were qualitatively similar. A possible explanation for the higher performance of the L1-Korean speakers is that this group had had more intensive exposure to English than the L1-Russian speakers. While the L1-Korean speakers tended to be graduate students and young professionals, the L1-Russian speakers came from different walks of life and had probably had less English exposure overall.

³² Additional statistical analyses, not reported here, showed variables such as age, age of first exposure to English, and length of intensive exposure were relatively poor predictors of L2-learners' article use.

³³ The same predictions would in principle hold for plural and mass nouns, except that instead of *a*, no article or use of *some* would be expected. See Ionin 2003b (Chapter 7) for evidence that L2-learners showed similar patterns across singular, plural, and mass contexts.

³⁴ The exception to this were as follows: blanks were not inserted before DPs which contained a numeral or a quantifier such as *many*; blanks were also not inserted in place of *a* in such formulaic expressions as *a few* and *a lot of*; finally, blanks were not inserted before NPs which followed the phrase *a lot of*, or before proper names. Additional changes which took place before the coders received the narratives were as follows: spelling errors made by the L2-learners were corrected, as long as they were not grammatical in nature; and punctuation and capitalization errors were corrected. This was done so that the coders would not be distracted by factors unrelated to article choice.

³⁵ The coders were asked to use one of these three options whenever possible; they were told that if none of the three choices sounded right, they could insert other words, such as possessives, numerals, demonstratives, or *some*. The coders were encouraged to pay attention to the plurality of the noun: if it looked like the L2-learner was clearly intending to use a plural form but put in a morphologically singular form (as in, *I read one of the book*), the coders could add an *s* at the end of the head noun and treat the entire NP as a plural. This instruction was especially important for the coding of the L1-Korean speakers' narratives: since Korean does not have plurality marking, these speakers frequently omitted *-s* in clearly plural contexts.

Finally, the coders were told that if they could not understand a given context at all (because of grammatical errors on the part of L2-English speakers) and did not know what article would be appropriate, they were to write in a question mark. The coders were asked to ignore grammatical errors in the narratives as much as they could, and to focus on the meaning that the L2-learner was trying to convey, since the meaning of the context determined what article would be most appropriate.

³⁶ Two additional coders were excluded due to not being native English speakers. One coder of the Korean narratives was a native speaker of Hindi, and one coder of the Russian narratives was bilingual in English and Urdu; it was not clear which of the two languages was primary for this coder. The coding of these two coders diverged noticeably from the coding of the native English-speaking coders. Notably, the non-native coders sometimes put *the* in the contexts in which all native English-speaking coders put *a*, but

in which the original L2-English learners had put *the*. This suggests that the tendency to overuse *the* with specific indefinites (noted for L1-Russian and L1-Korean speakers) exists also for speakers of Hindi/Urdu, even ones who are otherwise completely fluent in English.

³⁷ Additionally, if one coder put in a question mark, but the other three coders agreed on *the* or *a*, the context was also classified as definite or indefinite, respectively. If more than one coder put in a question mark, the context was discarded from further counts.

³⁸ In all of the examples in this section, the original L2-learners' written data are reported, complete with misspellings and grammatical errors.

³⁹ We do not want to claim that [+specific] indefinites are in principle disallowed in *there* and *have* constructions. Given the right context, it is possible to use a [+specific] indefinite in a *there* or *have* construction, as illustrated in (i) with referential *this* (see also Enç 1991 for evidence that specific indefinites headed by *a certain* may appear in *there*-constructions). However, the uses of *there* and *have* constructions in the L2-production data were largely those incompatible with specificity – hence our grouping of this category as [-specific].

- (i) a. I have this really neat new coffeemaker in my kitchen – it has a timer and it turns itself off automatically.
- b. There is this peculiar bird in the garden – it doesn't look like anything I've ever seen!

An anonymous reviewer suggests that indefinites in *there* and *have* constructions do not need to be separated from narrow scope indefinites, since they take narrow scope themselves: under many analyses, *there* and *have* constructions involve existential closure of the indefinite at the VP-level (see Diesing 1992, among others). Crucially, however, our concern is with narrow scope *with respect to an intensional operator*. Indefinites which scope under an intensional operator can never be [+specific], as shown by (ii), with referential *this*. On the other hand, (i) shows that indefinites in *there/have* constructions can be [+specific]. Hence, the decision to treat narrow-scope indefinites and indefinites in *there/have* constructions as separate categories.

- (ii) I want to read this book about frogs.
 - a. ... I just saw it at the bookstore. (√wide scope)
 - b. #... I don't care which one (*narrow scope)

⁴⁰ Some of these cases, such as (40b), may in fact contain wide-scope (and potentially [+specific]) rather than narrow-scope (and necessarily [-specific]) indefinites – for instance, in (40b), the speaker may have a particular bike in mind, and assign a noteworthy property to this bike. If that is the case, the overuse of *the* is no longer problematic for our hypothesis. Such an analysis is less likely for cases like (40a), where the speaker clearly does not have a particular trip in mind.

⁴¹ The emphasis in this and other quotations in this section is ours.

⁴² These preliminary results suggest that presuppositionality plays a greater role in the L2-acquisition of the English article system by L1-Korean speakers than by L1-Russian speakers. It is thus possible that effects of presuppositionality in L2-English are subject to L1-transfer. A follow-up study is at present investigating the interaction between presuppositionality and specificity in the L2-English of L1-Korean speakers.

to appear, *Language Acquisition 12*.

Tables

Table 1. Article grouping cross-linguistically: two-article languages

Article grouping by definiteness

	+definite	-definite
+specific		
-specific		

Article grouping by specificity

	+definite	-definite
+specific		
-specific		

Table 2. The two possible article groupings together

	+definite	-definite
+specific		
-specific		

Table 3. Predictions for article choice in L2-English:

	+definite (Target: <i>the</i>)	-definite (Target: <i>a</i>)
+specific	correct use of <i>the</i>	<u>overuse of <i>the</i></u>
-specific	<u>overuse of <i>a</i></u>	correct use of <i>a</i>

Table 4. Characteristics of L2-learners:

	L1-Russian participants	L1-Korean participants
<i>Number</i>	30 (18 female, 12 male)	40 (22 female, 18 male)
<i>Age range</i>	19;2 to 56;7 (mean = 38; median = 35)	19;11 to 40;0 (mean = 31; median = 31)
<i>Age of first exposure to English (in years)</i>	8 to 53 (mean = 14; median = 11)	9 to 14 (mean = 12; median = 12)
<i>Age at arrival in the US (start of intensive exposure to English)</i>	19;1 to 55;10 (mean = 36; median = 33)	16;0 to 35;1 (mean = 28, median = 29)
<i>Time in the US</i>	<0;1 to 10;4 (mean = 1;9, median = 1;2)	0;1 to 8;7 (mean = 2;6, median = 1;8)

Table 5. Predictions for article choice in L2-English: main item types

	[+definite] (Target: <i>the</i>)	[-definite] (Target: <i>a</i>)
[+specific]	categories in (17) and (18) <u>correct use of <i>the</i></u>	categories in (21) and (22) <u>overuse of <i>the</i></u>
[-specific]	categories in (19) and (20) <u>overuse of <i>a</i></u>	categories in (23) and (24) <u>correct use of <i>a</i></u>

Table 6. Predictions for article choice in L2-English: additional item types

	[+definite] (Target: <i>the</i>)	[-definite] (Target: <i>a</i>)
[+specific]	previous-mention definites (26) <u>correct use of <i>the</i></u>	
[-specific]		simple indefinites (25) <u>correct use of <i>a</i></u>

Table 7. Predictions for article choice in L2-English: the specificity distinction with definites and indefinites

	[+definite] (Target: the)	[-definite] (Target: a)
[+specific]	categories in (17) and (18) <u>correct use of <i>the</i></u>	categories in (21) and (22) <u>overuse of <i>the</i></u>
[-specific]	categories in (19) and (20) <u>overuse of <i>a</i></u>	categories in (23) and (24) <u>correct use of <i>a</i></u>

Table 8. Definiteness vs. specificity: intensional contexts.

L1-Russian speakers (N=26)

	[+definite] (target: <i>the</i>)		[-definite] (target: <i>a</i>)	
[+specific] (wide scope)	87% <i>the</i>	6% <i>a</i>	36% <i>the</i>	52% <i>a</i>
[-specific] (narrow scope)	58% <i>the</i> ***	35% <i>a</i> ***	6% <i>the</i> ***	89% <i>a</i> ***

Table 9. Definiteness vs. specificity: intensional contexts.

L1-Korean speakers (N=39)

	[+definite] (target: <i>the</i>)		[-definite] (target: <i>a</i>)	
[+specific] (wide scope)	95% <i>the</i>	3% <i>a</i>	26% <i>the</i>	71% <i>a</i>
[-specific] (narrow scope)	87% <i>the</i> **	10% <i>a</i> **	6% <i>the</i> ***	90% <i>a</i> ***

Table 10. Definiteness vs. specificity: extensional contexts.

L1-Russian speakers (N=26)

	[+definite] (target: <i>the</i>)		[-definite] (target: <i>a</i>)	
[+specific]	71% <i>the</i>	11% <i>a</i>	37% <i>the</i>	55% <i>a</i>
[-specific]	56% <i>the</i> †	31% <i>a</i> **	9% <i>the</i> ***	78% <i>a</i> **

Table 11. Definiteness vs. specificity: extensional contexts.

L1-Korean speakers (N=39)

	[+definite] (target: <i>the</i>)		[-definite] (target: <i>a</i>)	
[+specific]	80% <i>the</i>	4% <i>a</i>	17% <i>the</i>	83% <i>a</i>
[-specific]	73% <i>the</i>	17% <i>a</i> **	2% <i>the</i> **	96% <i>a</i> **

Table 12. Definiteness vs. specificity: all contexts. L1-Russian speakers (N=26)

	[+definite]		[-definite]	
[+specific]	79%the	8%a	36%the	54%a
[-specific]	57%the	33%a	7%the	84%a

Table 13. Definiteness vs. specificity: all contexts. L1-Korean speakers (N=39)

	[+definite]		[-definite]	
[+specific]	88%the	4%a	22%the	77%a
[-specific]	80%the	14%a	4%the	93%a

Table 14. Effects of definiteness and specificity: results of repeated-measures ANOVAs

<u>L1-Russian speakers</u>	use of <i>the</i>	use of <i>a</i>
Definiteness	F(1, 25) = 61***	F(1, 25) = 57***
Specificity	F(1, 25) = 21***	F(1, 25) = 25***
Definiteness * Specificity	F(1, 25) = 1.66	F(1, 25) = 1.04
<u>L1-Korean speakers</u>	use of <i>the</i>	use of <i>a</i>
Definiteness	F(1, 38) = 406***	F(1, 38) = 501***
Specificity	F(1, 38) = 29***	F(1, 38) = 27***
Definiteness * Specificity	F(1, 38) = 4.9*	F(1, 38) = 1.95

* p < .05

** p < .01

***p < .001

Table 15. Effects of definiteness, specificity, and proficiency level

<u>L1-Russian speakers</u>	use of <i>the</i>	use of <i>a</i>
Definiteness	F(1, 24) = 68.19***	F(1, 24) = 63.48***
Definiteness * level	F(1, 24) = 7.71*	F(1, 24) = 7.5*
Specificity	F(1, 24) = 22.98***	F(1, 24) = 30.8***
Specificity * level	F(1, 24) = 1.9	F(1, 24) = 4.05‡
Definiteness * Specificity	F(1, 24) = 1.47	F(1, 24) = 0.71
Definiteness * Specificity * level	F(1, 24) = 0.05	F(1, 24) = 1.13
<u>L1-Korean speakers</u>	use of <i>the</i>	use of <i>a</i>
Definiteness	F(1, 37) = 188.2***	F(1, 37) = 257.15***
Definiteness * level	F(1, 37) = 3.32	F(1, 37) = 0.02
Specificity	F(1, 37) = 19.13***	F(1, 37) = 17.09***
Specificity * level	F(1, 37) = 0.58	F(1, 37) = 0.35
Definiteness * Specificity	F(1, 37) = 2.95	F(1, 37) = 0.73
Definiteness * Specificity * level	F(1, 37) = 0.04	F(1, 37) = 0.04

‡p < .06 (marginal)

* p < .05

** p < .01

***p < .001

Table 16. Comparison of article use on different types of indefinites

Indefinites: target: <i>a</i>	L1-Russian speakers		L1-Korean speakers	
	[+specific] indefinites (21), (22)	36%the	54%a	22%the
[-specific] indefinites (23), (24)	7%the	84%a	4%the	93%a
first-mention ([-specific]) indefinites (25)	15%the	69%a	6%the	91%a

Table 17. Comparison of article use on different types of definites

Definites: target: <i>the</i>	L1-Russian speakers		L1-Korean speakers	
specific definites (17), (18)	79% <i>the</i>	8% <i>a</i>	88% <i>the</i>	4% <i>a</i>
non-specific definites (19), (20)	57% <i>the</i>	33% <i>a</i>	80% <i>the</i>	14% <i>a</i>
previous-mention definites (26)	72% <i>the</i>	20% <i>a</i>	81% <i>the</i>	17% <i>a</i>

Table 18. Performance on individual previous-mention items: all L2-English learners

L2-learner group	Previous-mention definite contexts in which control participants allowed <i>a</i>		Previous-mention definite contexts in which control participants always put <i>the</i>	
L1-Russian speakers	63% <i>the</i>	29% <i>a</i>	81% <i>the</i>	12% <i>a</i>
L1-Korean speakers	74% <i>the</i>	26% <i>a</i>	88% <i>the</i>	9% <i>a</i>

Table 19. Performance on definite items where uniqueness is obligatory

L2-learners group	(28) ([+specific] definite)		(29) ([-specific] definite)	
L1-Russian speakers	54%the	23%a	46%the	19%a
L1-Korean speakers	57%the	5%a	53%the	18%a

Table 20. Definiteness vs. specificity: intensional contexts. All beginners (N=5)

	[+definite] (target: <i>the</i>)		[-definite] (target: <i>a</i>)	
[+specific] (wide scope)	65% <i>the</i>	20% <i>a</i>	70% <i>the</i>	20% <i>a</i>
[-specific] (narrow scope)	50% <i>the</i>	45% <i>a</i>	35% <i>the</i>	35% <i>a</i>

Table 21. Definiteness vs. specificity: extensional contexts. All beginners (N=5)

	[+definite] (target: <i>the</i>)		[-definite] (target: <i>a</i>)	
[+specific]	65% <i>the</i>	30% <i>a</i>	80% <i>the</i>	20% <i>a</i>
[-specific]	55% <i>the</i>	35% <i>a</i>	15% <i>the</i>	70% <i>a</i>

Table 22. Definiteness vs. specificity: predictions for L2-English

	[+definite] (Target: the)	[-definite] (Target: a)
[+specific]	categories in (17) and (18) <u>correct use of <i>the</i></u>	categories in (21) and (22) <u>overuse of <i>the</i></u>
[-specific]	categories in (19) and (20) <u>overuse of <i>a</i></u>	categories in (23) and (24) <u>correct use of <i>a</i></u>

Table 23. Definiteness vs. specificity: summary of results from both L1-Russian and L1-Korean speakers

	[+definite] (Target: the)	[-definite] (Target: a)
[+specific]	correct use of <i>the</i>	<u>overuse of <i>the</i></u>
[-specific]	<u>overuse of <i>a</i></u>	correct use of <i>a</i>

Table 24. Predictions for article choice in L2-English production data (singular contexts)

	+definite (Target: <i>the</i>)	-definite (Target: <i>a</i>)
+specific	correct use of <i>the</i>	<u>overuse of <i>the</i></u>
-specific	<u>overuse of <i>a</i></u>	correct use of <i>a</i>

Table 25. Article use in singular definite contexts

<u>article used</u>	number of tokens (% of total)	
	<u>L1-Russian</u>	<u>L1-Korean</u>
<i>the</i> (target article)	68 (75%)	116 (81%)
<i>a</i>	1 (1%)	8 (6%)
nothing	22 (24%)	19 (13%)

Table 26. Article use across singular indefinite contexts; target: *a*

<i>article used by</i>	wide scope: may be [+specific]	in <i>there/have</i> constructions: most likely [-specific]	narrow scope: must be [-specific]
<u>L1-Russian</u>			
<i>the</i>	13 (28%)	3 (3%)	2 (8%)
<i>a</i> (target article)	17 (37%)	40 (35%)	18 (75%)
null	16 (35%)	72 (63%)	4 (17%)
<u>L1-Korean</u>			
<i>the</i>	8 (13%)	0 (0%)	4 (6%)
<i>a</i> (target article)	37 (62%)	84 (63%)	35 (53%)
null	15 (25%)	49 (37%)	27 (41%)

Table 27. Summary of article use in the production data

CONTEXT	[+definite]: target the	[-definite]: target a
[+specific]	correct use of <i>the</i>	some overuse of <i>the</i>
[-specific]	unattested in the data	mostly correct use of <i>a</i>

Table 28. Article grouping by definiteness

	+definite	-definite
+specific		
-specific		

Article grouping by specificity

	+definite	-definite
+specific		
-specific		

Figure captions

Figure 1: Use of *the* by category

Figure 2: Use of *a* by category

Figure 3: Number of L2-learners showing each pattern

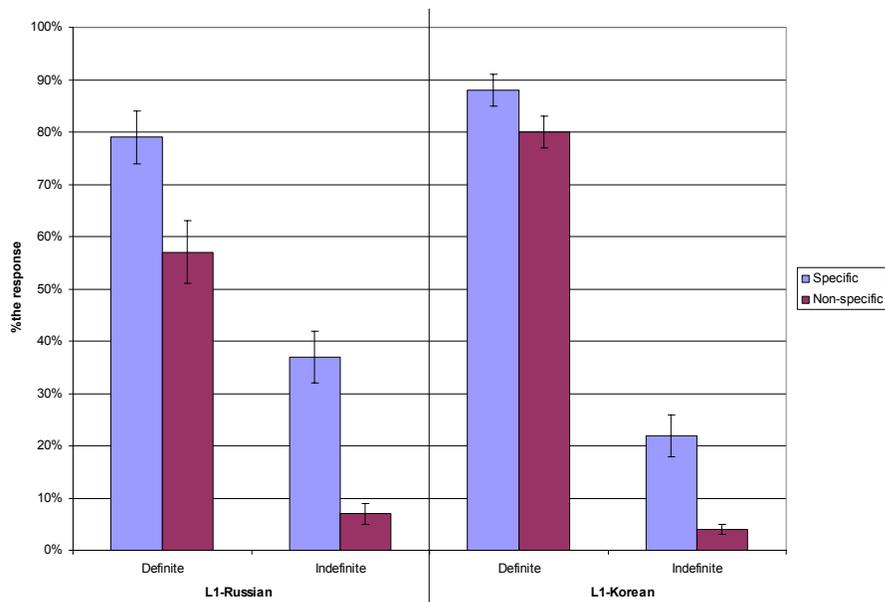


Figure 1.

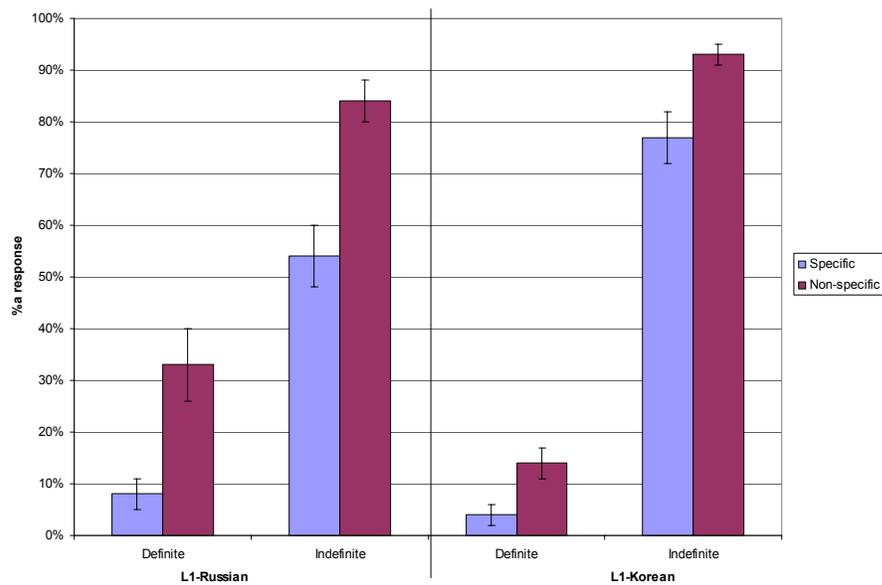


Figure 2.

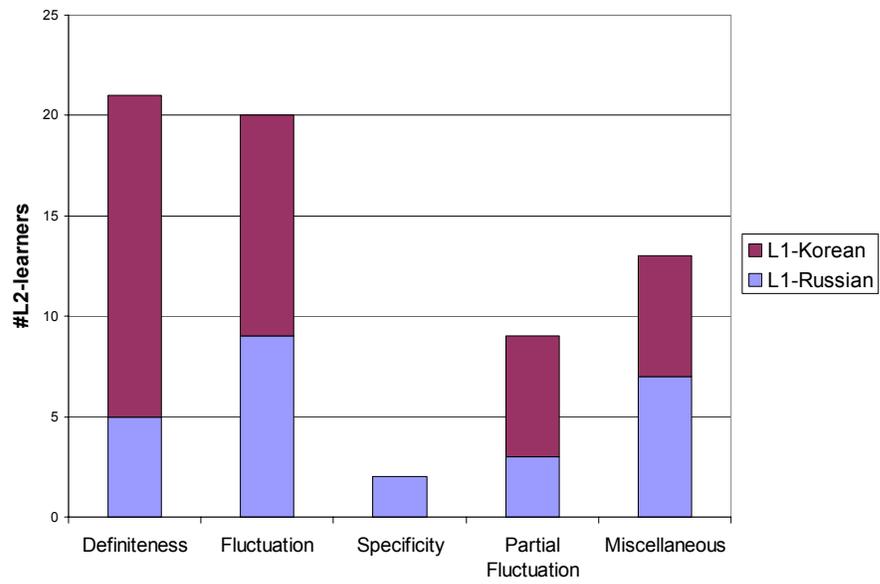


Figure 3.