

**Acquisition of the English article system in SLA and the Missing Surface Inflection
Hypothesis**

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Abstract

This paper examines the article system in interlanguage grammar focusing on Japanese learners of English, whose native language lacks articles. It will be demonstrated that for the acquisition of the English article system, count/mass distinctions and definiteness are the crucial factors. Although Japanese does not employ the article system to encode these aspects, it will be argued that they are nevertheless syntactically encoded. Hence the problem for these learners must be to map these features onto the appropriate surface forms as the Missing Surface Inflection Hypothesis predicts (Prévost & White 2000). This suggestion will further be supported empirically by a fill-in-the article task. It will conclude that these Japanese learners understand the English article system fairly well, possibly due to their native language, yet have problems with realizing these features in the target language.

Key words: English articles, classifiers, the nominal mapping parameter, the Missing Surface Inflection Hypothesis, Japanese learners of English

1. Introduction

It is commonly claimed that the English article system is one of the most difficult aspects of the grammar for second language (L2) learners whose first language (L1) lacks articles ([-ART] languages)¹. In fact, it has been observed that L2 learners whose L1 has articles ([+ART] languages) acquire the English article system more rapidly than those of [-ART] languages (Master 1997; Thomas 1989; Zobl 1982). This paper aims to make a first step toward the question of why the English article system is so difficult for L2 learners of [-ART] languages, focusing on Japanese learners of English. As will be shown below, Japanese lacks articles, thus Japanese learners of English are good candidates to examine as to why the English article system is difficult for [-ART] language learners.

I will examine this question from the perspective of the Missing Surface Inflection Hypothesis (MSIH) (Prévost & White 2000). MSIH claims that the absence of surface forms in L2 production does not necessarily mean that the corresponding underlying knowledge is lacking from the learners' grammar (Haznedar & Schwartz 1997; Lardiere 1998, 2000; Prévost & White 2000). Therefore, MSIH predicts that the omission of articles in L2 production, which is a common characteristic of the article system in interlanguage grammars (ILG), does not by itself imply that ILGs do not have the features relevant to the acquisition of the English article system, such as definiteness and count/mass distinctions. I will argue below that, as MSIH predicts, the real problem for Japanese learners of English is the surface forms of articles themselves rather than the underlying knowledge associated with English articles.

This paper is organized as follows: in Section two I will briefly summarise the function of English articles. Section three reviews previous studies on acquisition of the English article system in SLA, and I will claim that the learners' L1 needs to be examined in order to investigate why the article system is difficult to acquire. Accordingly, section four presents an analysis of the Japanese grammar of the relevant aspects. Section five further considers the question empirically. Section six concludes the paper.

2. Review of the English articles

2.1. The nominal mapping parameter

The nominal mapping parameter (Chierchia 1998) claims that nouns are either argumental ([+arg]) or predicative ([+pred]). [+arg] nouns are of type <e> thus refer to kinds, whereas [+pred] nouns are of type <e, <e,t>> and refer to instances of properties. The parameter further predicts that there are three types of languages; i.e. [+arg, -pred] type, [-arg, +pred] type, and [+arg, +pred] type. English is categorized as the third type, i.e. a [+arg, +pred] language. What it means is that in some context a noun in English is regarded as [+arg], while in other contexts it is considered as [+pred]. Chierchia (1998:356) argues that “nouns of type arg are going to be mass nouns and will be able to

occur as bare arguments” and those of type pred “will have a set of atoms as its extensions; that is, it will be count”². Being of type $\langle e, \langle e, t \rangle \rangle$, a [+pred] noun or a count singular noun cannot stand by itself as an argument. This is why sentence (1) is ungrammatical in English;

(1) *I bought ring.

For a [+pred] noun to become an argument, it requires a determiner, for example an article *a* or *the* in English (2a,b) or has to be pluralized (2c);

- (2) a. I bought a ring.
b. I bought the ring.
c. I bought rings.

A [+arg] noun, on the other hand, is by itself argumental, thus it does not require an article (3a), though the definite article can also be added (3b);

- (3) a. I bought water.
b. I bought the water.

It is also claimed that when a [+arg] noun takes a determiner, it undergoes predicativization.

2.2. Count/mass distinctions

Comparing examples (2) and (3), it is observed that the definite article is not sensitive to whether a noun is [+arg] or [+pred], or mass or count. When a noun is indefinite, however, [+arg] nouns or mass nouns only select the \emptyset article³, and [+pred] nouns or count nouns only select the indefinite article *a*.

The different characteristics between mass nouns and count nouns can also be explained by the notion of boundedness ([±b]) (Jackendoff 1992).⁴ Singular count nouns are [+b] since they denote entities with a clear boundary which is a subset of a potentially larger set of like entities. Nouns that denote individuals such as *pig* and those that denote groups such as *committee* are in this category, and these nouns are compatible with the indefinite article (*a pig/ a committee*). On the other hand, nouns of substances (e.g. *water*) and aggregates (e.g. *cattle*) are regarded as [-b] because these nouns do not have clear boundaries. Plural nouns (e.g. *pigs*) are also included in this category since the upper limit on the number of members of the relevant set is not defined; only the lower limit is fixed as being greater than one. This explains the ungrammaticality of **a water/cattle/pigs*. Instead, these nouns are used as bare nominals (that is, with \emptyset) in indefinite contexts (4);

(4) I bought water/cattle/pigs.

As is observed in this subsection, the count/mass distinction is a very important aspect of the English article system. It determines whether a noun selects *a* or \emptyset in indefinite contexts. The choice of articles in definite contexts is the topic of the next subsection.

2.3. Definiteness

As the previous subsection has shown, the definite article *the* is compatible with both count and mass nouns. What determines the choice between *the*, on the one hand, and *a* or \emptyset on the other, is definiteness.

Following Russell (1905), a definite noun refers to a unique entity in the context of discourse. Therefore, sentence (2b), repeated here, indicates that there is only one ring in this context that satisfies the description “I bought x”. It is formally represented as (5);

(2) b. I bought the ring.

(5) $\exists x$ (RING (x) & $\forall y$ (RING (y) \rightarrow y=x) & BUY (I, x))

The notion of uniqueness can be extended to plural definite nouns, which now denote totality of the entities (Hawkins 1978; Chesterman 1991). Thus, *the rings* denotes a unique set of rings in the context.

An indefinite noun, on the other hand, merely asserts the existence of the entity it refers to. Thus, sentence (2a), repeated here, is satisfied as long as there is a ring that the speaker bought. Hawkins (1991) further argues that indefinites imply non-uniqueness. (6) is the formal representation of (2a);

(2) a. I bought a ring.

(6) $\exists x$ (RING (x) & BUY (I, x))

This section has briefly reviewed the article system in English. It has been demonstrated that the choice between *a* and \emptyset depends on whether a noun is used as mass (i.e. [+arg]) or count (i.e. [+pred]) respectively. In addition, it has also been noted that the choice between *the*, on the one hand, and *a* and \emptyset , on the other hand, depends on whether a noun refers to a definite or an indefinite entity respectively. The task for L2 learners is, therefore, to know whether a noun refers to a) a count or mass entity, and b) a definite or indefinite entity.

3. Previous studies on acquisition of the English article system in SLA

The acquisition of the English article system for L2 learners has been studied rather extensively, examining learners from various [-ART] languages; Chinese (Zobl 1982; Robertson 2000; Lardiere 2004, 2005), Czech & Slovak (Young 1996), Hmong (Laos) (Huebner 1979), Japanese (Parrish 1987; Wakabayashi 1997; Goto Butler 2002; Snape 2006; Hawkins et al. 2005, 2006), Korean (Ionin, Wexler & Ko 2003), Polish (Ekiert

2004), Russian (Ionin & Wexler 2003), and Turkish (White 2003). Some of the studies compare the learners of [+ART] languages (e.g. Spanish and Greek) and of [-ART] languages, and demonstrate that the acquisition of articles is more problematic for learners of [-ART] languages (Zobl 1982; Thomas 1989; Master 1997; Hawkins et al. 2005, 2006; Snape 2006).

More strikingly, these studies across L2 learners of various [-ART] languages quite consistently report the overuse of the \emptyset article in their ILGs even in the advanced stage (e.g. Master 1997; Robertson 2000; White 2003). This tendency, however, does not tell us anything more than that the learners often omit articles where they are necessary from the viewpoint of English. It is still unclear whether the problems lie in the surface forms or the relevant knowledge such as definiteness and count/mass distinctions.

There will be at least two possible courses from which the knowledge of definiteness and count/mass distinctions may come in L2 learning. One possibility is that the knowledge comes from learners' L1, or in another possibility, directly from UG if their L1 does not linguistically encode these features. It is the first possibility in [-ART] languages that the present study will investigate.

Another point that should be noted here is that many of the previous studies have focused only on whether the learners' use of articles is "right" or "wrong" in terms of the English grammar. This has been termed the "comparative fallacy" by Bley-Vroman (1983:4), who maintains that "the learner's system is worthy of study in its own right, not just as a degenerate form of the target system". It is true that, especially for the studies whose primary aim is how to teach the English article system to non-native speakers of English, investigating where learners make "errors" is very important since the teachers' and learners' ultimate goal is for the learners to be able to use articles correctly in terms of the English grammar. Nevertheless, this kind of approach will tell us little about the nature of ILGs. Bearing this in mind, the present study will investigate what is happening in the article system in the learners' grammar, not just whether learners use English articles correctly or not from the viewpoint of the target language.

4. Japanese grammar

Section 2 claims that definiteness and count/mass distinctions are the crucial features for the appropriate use of articles in English. Thus, when considering the possible role that the L1 plays in English L2 article acquisition, it is important to understand how these features are encoded in Japanese grammar. The nominal mapping parameter discussed in section 2 classifies Japanese as a [+arg, -pred] language. This implies that all the nouns in Japanese are regarded as [+arg], that is, mass. In fact, a simple noun in Japanese does not require a determiner to become an argument (7);

(7) *Yubiwa-o katta*

ring-ACC bought⁵

‘(I) bought a/the ring’ or ‘(I) bought some/the rings’.

Furthermore, as the translation of (7) shows, a noun in Japanese is neutral regarding definiteness (Kakegawa 2004; Watanabe 2005) and number (Nemoto 2005). In (7), *yubiwa* ‘ring’ can denote that a) there exists a ring that the speaker bought, or b) there is a unique ring in this context that the speaker bought. In terms of the number, *yubiwa* can refer to a single ring or some rings depending on the context.

Being mass, a numeral cannot directly modify a noun in Japanese (8a), which is similar to the ungrammaticality of (8b) in English.

(8) a. **Go yubiwa-o katta.*

five ring-ACC bought

b. **I had five waters today*⁶.

Instead, Japanese nouns require classifiers to get counted. (8c) and (8d) below are two possible structures of classifier phrases in Japanese, and (8e) is a grammatical counterpart of (8b) for illustration.

- (8) c. Yubiwa-o go-ko katta.
 ring-ACC five-CL bought
- d. Go-ko-no yubiwa-o katta.
 five-CL-NO ring-ACC bought
- e. I had five glasses of water today.

Unlike the case with a simple noun as in (7), however, it is argued that classifier phrases are not neutral as to definiteness (Takegawa 2004; Watanabe 2005). For example, when a constituent [numeral + classifier] follows a noun as in (8c), the speaker merely asserts the existence of five rings that s/he bought. Any five rings will satisfy the description. Therefore, in this sense, (8c) is indefinite, which is equivalent to “I bought five rings” in English. On the other hand, when a [numeral + classifier] precedes the noun with the help of *no*, “five rings” here denotes a unique set of rings in the context, thus it is definite; “I bought the five rings”. (8c) and (8d) can be formally represented as (8c)’ and (8d)’ respectively:

- (8c)’ $\exists x (\text{RING}(x) \ \& \ \text{BUY}(I, x)) \ [x] = 5$
- (8d)’ $\exists x (\text{RING}(x) \ \& \ \forall y (\text{RING}(y) \ \rightarrow \ y=x) \ \& \ \text{BUY}(I, x)) \ [x] = 5$

Classifier phrases in Japanese do not only encode definiteness distinctions but also distinguish count and mass entities. First, the distinctions are observed in a behaviour of the general classifier *-ko* ‘a piece of’. This classifier does not specify what unit we are counting, so the specific property of the unit being counted depends on the noun that the classifier modifies. In other words, when *-ko* attaches to ‘ring’ as in (8c), we know that we are counting a ring itself because ‘ring’ provides a clear boundary for counting. However, *-ko* cannot modify [-bounded] nouns (cf. Jackendoff 1992) such as *mizu* ‘water’ (9).

- (9) a. *Mizu-o go-ko nonda.
water-ACC five-KO drank
b. *Go-ko-no mizu-o nonda.
five-KO-NO water-ACC drank

It is incompatible because neither the classifier nor the noun creates a boundary to be counted. For these [-bounded] nouns, because the nouns do not provide countable units, classifiers have to specify what units we are counting, thus a classifier such as *-hai* ‘glasses of’ or *-hon* ‘bottles of’ is needed (10)-(11):

- (10) a. Mizu-o go-hai nonda.
water-ACC five-glasses drank
‘I drank five glasses of water.’
b. Mizu-o go-hon nonda.
water-ACC five-bottles drank
‘I drank five bottles of water.’
(11) a. Go-hai-no mizu-o nonda.
Five-glasses-NO water-ACC drank
‘I drank the five glasses of water.’
b. Go-hon-no mizu-o nonda.
Five-bottles-NO water-ACC drank
‘I drank the five bottles of water.’

Second, *-bun* ‘an amount equal to’ in Japanese can modify [-bounded] nouns but not [+bounded] nouns (Watanabe 2006)⁷ (12).

(12) a. Mizu-o go-hai-bun nonda.

Water-ACC five-glasses-BUN drank

‘I drank water that is equal to the amount of five glasses.’

b. *Yubiwa-o go-ko-bun katta.

Ring-ACC five-CL-BUN bought

?‘I bought rings that are equal to the amount of five rings’

In (12a), the focus is on how much water the speaker drank thus the description is satisfied as long as the speaker drank water that is equal to the amount of five glasses of water regardless of what contains the water. In other words, even if the speaker drank the water out of a bucket, the sentence is true if the amount is equal to five glasses. On the other hand, *-bun* is not compatible with [+bounded] nouns such as ‘ring’ as in (12b). Because ‘ring’ itself has a countable boundary, it cannot be counted in any other way. The oddity is also evident in the English translation.

It should be noted, however, that the claim that the classifiers in Japanese distinguish count and mass entities does not contradict the claim that all nouns in Japanese are [+arg] thus mass (Chierchia 1998). As Chierchia points out (1998:355) “saying that all members of category NP are mass-like does not mean saying that something resembling the mass/count distinction cannot be found in such languages”. As he rightly speculates, Japanese nouns are [+arg] and behave like mass nouns syntactically as exemplified in (7) above, yet their boundedness can be encoded by classifiers. In a sense the differences between [+bounded] nouns and [-bounded] nouns in Japanese are similar to the differences between “mass mass nouns” (e.g. *water*) and “count mass nouns” (e.g. *furniture*) in English (Doetjes 1997). Although the detailed discussion of whether Japanese is indeed a [+arg, -pred] language is beyond the scope of the present paper⁸, what is important for the purpose of this paper is that classifiers in Japanese do distinguish count and mass entities.

This section has argued that although a simple noun does not distinguish definite and indefinite, or count and mass entities, the distinctions are made in the classifier phrases in Japanese. It implies that the features necessary for the appropriate use of

articles in English, that is, definiteness and features which underlie the count/mass distinction, are present in the L1 Japanese grammar. Therefore, I argue that Japanese learners of English have an underlying knowledge of definiteness and count/mass distinctions despite the fact that Japanese does not employ articles. Thus, the problem for Japanese learners is to map the knowledge onto the surface forms of articles, which is consistent with the MSIH.

5. The study

5.1. Research Questions

The discussion of the English article system and the Japanese noun phrases proposes three important questions to the examination of the article system in the ILG of Japanese learners:

I. Do learners know that singular count nouns in English require an article?

The nominal mapping parameter claims that Japanese and English belong to different groups in terms of the nature of the nouns, Japanese being a [+arg, -pred] language and English a [+arg, +pred] language. For L2 learning, then, Japanese learners have to recognize that some nouns in English are [+pred], thus cannot become an argument without a determiner.

II. Do learners know which uses of nouns belong to [+pred] (i.e. count uses) and [+arg] (i.e. mass uses)?⁹

When learners recognize that nouns in English require a determiner to become an argument in some situations but not in others, the next task will be to know which situation makes a noun mass or countable. Since this information is language specific, learners may have to learn this, though there may be overlap between English and Japanese in this regard.

III. Do learners know that definiteness is involved in the choice of articles and that definiteness marking is obligatory?

Another factor that learners have to know to acquire the English article system is that the choice of *the* and *a/ø* depends on definiteness. Thus, whether learners are sensitive to definiteness distinctions is also examined.

5.2. Participants

Eight Japanese speakers and one native control were recruited for the task. All the Japanese speakers are adult L2 learners currently studying in Australia; four postgraduate students, one undergraduate student, and three language school students in the highest proficiency level of the school. They had been in Australia for three to thirteen months at the time of the data collection. Except for one subject who has been in English speaking countries for a total of 26 months, none of them have more than one year of residence in English speaking countries including prior experiences to Australia. Therefore, it appears that their ILGs are still developing, though from the fact that they had to pass IELTS or TOEFL to undertake courses in a university in Australia and the language school students are in the highest level of the school, it can be assumed that they have a good command of English. The native control is a speaker of American English.

5.3. Materials

Having claimed that MSIH accounts for the acquisition of the English article system for Japanese learners of English in theoretical terms, it is important to examine this hypothesis empirically as well. A forced-elicitation task (Hawkins et al. 2005) was replicated to explore the article system of Japanese learners of English. The task is a fill-in-the-blank task using paper and pencil. The items are structured in a conversational style, and each conversation consists of three conversational turns. A blank is placed in

the object position of the third turn, and the subjects are asked to fill in the blank by choosing an article among *a*, *an*, *the* and \emptyset . There are five contexts to be examined; anaphoric uses, encyclopedic uses, and larger situation uses are all definite specific contexts, thus target at the elicitation of *the*, while specific indefinite and non-specific indefinite (non-referential *de re* and *de dicto*) contexts elicit the choice of *a* or \emptyset . Each context includes singular count nouns, plural nouns and mass nouns. The total number of the items is 72. The examples of the task are in Appendix. This task was chosen because it can directly elicit the use of articles in each context, which may not occur in a more spontaneous production task, thus allowing us to compare the use of articles in different contexts. In addition, since a forced-elicitation task in some manner or another is a common method used in various studies (e.g. Goto Butler 2002, Liu & Gleason 2002; Ionin & Wexler 2003), and my task itself is an attempted replication of Hawkins et al. (2005), the results will provide for an interesting comparison between the studies.

5.4. Results

Overall Result

First, Table 1 presents the overall nativelikeness of the article system of the Japanese learners in this task. For the discussion below I will order the participants on the basis of mastery of the English article system, as reflected in the number of correct answers. As the table demonstrates, J7 and J2 seem to approximate their article systems to the English article system. This fact suggests that they have a quite good understanding of the English article system, which may or may not appear in the surface forms in more spontaneous productions, thus supports MSIH empirically.

Table 1 Overall Result

Subject	Number of “Correct” answers	%
J5	25/72	34.7%
J4	48/72	66.7%
J1	49/72	68.1%
J8	50/72	69.4%
J6	51/72	70.8%
J3	57/72	79.2%
J7	62/72	86.1%
J2	64/72	88.9%
NS	72/72	100%

* NS = native control

Question 1: Do learners know that singular count nouns in English require an article?

To examine whether the learners know that singular count nouns in English cannot become an argument without a determiner, use of \emptyset article with a singular count noun, for example (13), is counted (Table 2).

(13) A: I bought some shoes online, but one of them was missing on arrival.

B: Oh, dear. What did you do?

A: I asked * \emptyset seller for my money back.

Table 2 The use of \emptyset with singular count nouns

Subjects	\emptyset with singular count nouns (24)
J5	3 (12.5%)
J4	4 (16.7%)
J1	0
J8	2 (8.3%)
J6	2 (8.3%)
J3	0
J7	0
J2	0
NS	0

There are a total of 24 singular count nouns in the task, however, even the subjects at the lower proficiency use \emptyset article only 3-4 times with singular count nouns. Thus, it appears that the learners in this study know that singular count nouns in English require an article from the early stages of the development of their article systems. Furthermore, Table 2 also demonstrates that these learners make fewer uses of \emptyset article with singular count nouns as their article systems develop, and eventually make no such uses as is required in the English article system. This suggests that the omission of articles, which is commonly observed in L2 learning as is discussed above, is more frequent with plural or mass nouns. This tendency may be related to their status as [+arg] as opposed to singular count nouns. Alternatively, the omission of articles may be a phenomena that is essentially observed in a more spontaneous situation.

Question 2: Do learners know which uses of nouns belong to [+pred] (i.e. count uses) and [+arg] (i.e. mass uses)?

It is difficult to examine in a task of this kind whether the learners distinguish count and mass uses of nouns in the way English speakers do because the definite article is not sensitive to count/mass distinctions as is discussed above. Nevertheless, the use of the indefinite article *a* with mass nouns is suggestive because the learners would not use *a* if they do treat these nouns as mass. Table 3 shows that it is indeed the case that some learners treat English mass nouns as count nouns and attach *a* to them. There are a total of 24 mass uses of nouns in the task and the learners' use of *a* varies from 16 times to only once. More interestingly, Figure 1 illustrates that the use of *a* with mass nouns does not seem to be related very much to the development of the article system. Some higher-level learners use the indefinite article more often than the lower level learners.

Table 3 Use of *a* with mass nouns

Subj	<i>a</i> + mass (24)	Examples
J5	16 (66.7%)	He got her *a perfume He has *an evidence He bought *a wine
J4	6 (25%)	
J1	7 (29.2%)	
J8	1 (4.2%)	I should buy milk This recipe requires butter He will have sugar in his tea again
J6	5 (20.8%)	
J3	3 (12.5%)	
J7	2 (8.3%)	
J2	1 (4.2%)	

Figure 1 The Use of *a* + mass nouns

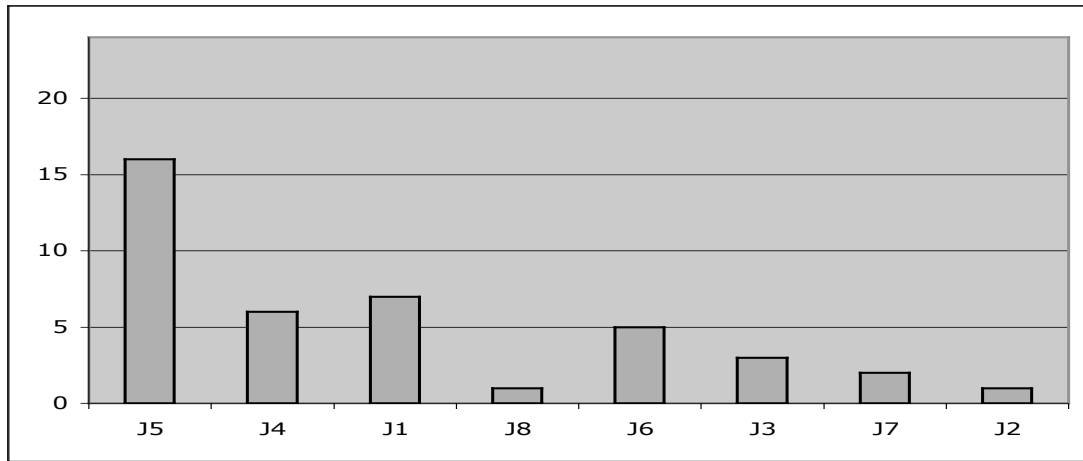
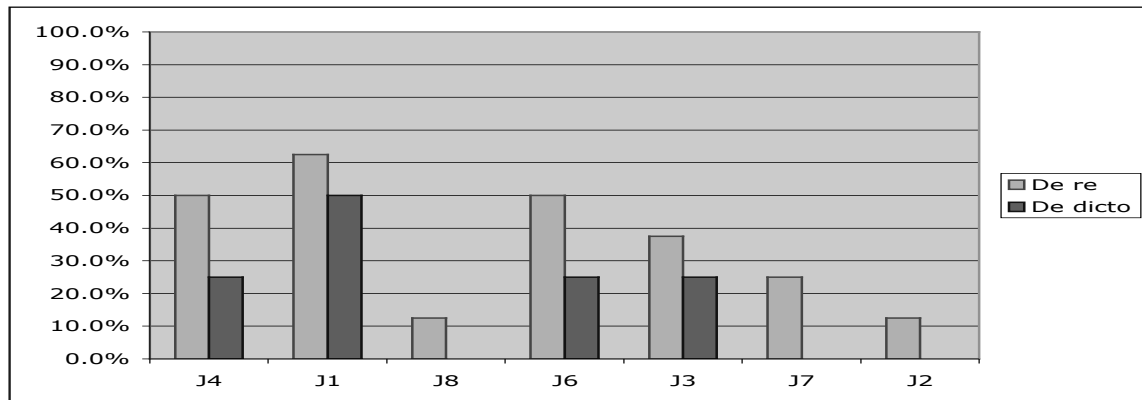


Figure 2 The use of *a* + mass in de re and de dicto contexts¹⁰



The use of *a* with mass nouns, however, may not be completely random. Figure 2 illustrates the use of *a* with mass nouns in *de re* and *de dicto* contexts. In *de dicto* contexts, the noun is in the scope of an operator such as modal, negation or intentional verb (Kearns 2000), and it is non-specific (14). On the other hand, in *de re* contexts, the noun is not in the scope of an operator, and may or may not be specific (15a,b).

(14) *de dicto*

A: I've got my relatives coming for Christmas.

B: How many are there?

A: Thirteen. I should buy ___ milk.

(15) a. *de re* [+specific]

A: My daughter has dry skin.

B: How is she dealing with it?

A: She is using ___ coconut oil, but I don't know if it will work.

b. *de re* [-specific]

A: Alan has been across to France again.

B: What for?

A: He says he bought ___ wine, but I haven't seen any of it.

There is a tendency for the Japanese learners to supply *a* in the contexts such as (15a) and (15b), while \emptyset in the contexts such as (14). Indeed, as Figure 2 demonstrates, no learners (except for J5; see footnote 7) supply *a* more often in the *de dicto* contexts than in the *de re* contexts. Therefore, Japanese learners seem to be sensitive to *de re/de dicto* distinctions regarding the use of *a* with mass nouns. In other words, it may not be the case that Japanese learners entirely confound count and mass uses of nouns. Rather, they may consider nouns in *de re* contexts as [+bounded], thus treat them as count uses of the nouns. Although the data is suggestive, further research is needed since the number of the items are too few to provide conclusive results.

Subj	[+def +sp] (<i>the</i>) (36)	[-def +sp] (<i>a</i>) (12)	[-def -sp] (<i>a</i>) (24)
J5	27.8% (10)	41.7% (5)	16.7% (4)
J4	58.3% (21)	16.7% (2)	0
J1	77.8% (28)	66.7% (8)	0
J8	55.6% (20)	16.7% (2)	8.3% (2)
J6	61.1% (22)	16.7% (2)	0
J3	77.8% (28)	25% (3)	8.3% (2)
J7	80.6% (29)	0	0
J2	80.6% (29)	0	0
NS	100% (36)	0	0

Table 4 Use of *the* in [+/-def][+/-sp] contexts

Question 3: Do learners know that definiteness is involved in the choice of articles and that definiteness marking is obligatory?

To examine whether the learners use *the* and *a/∅* to distinguish definites and indefinites, the use of *the* in the contexts [+def, +sp], [-def, +sp], and [-def, -sp] is counted. There are 36 [+def, +sp] contexts, which targets at eliciting *the*, and 12 [-def, +sp] contexts and 24 [-def, -sp] contexts will elicit the use of *a/∅* (i.e. non-use of *the*). Table 4 presents the result.

As is observed, the higher level learners (e.g. J2 and J7) use *the* and *a/∅* to distinguish definites and indefinites since they use *the* only in the definite contexts, although the marking of definite by *the* does not attain 100%. This seems to support the claim from previous studies that the problem for learners of [-ART] languages is the omission of articles, though further research is needed to specifically investigate this point.

For lower level learners, the distinction of *the* and *a/∅* appears to depend on specificity. They use *the* in both [+def, +sp] and [-def, +sp] contexts, but rarely use it in [-def, -sp] contexts. Ionin & Wexler (2003) and Ionin, Wexler & Ko (2003) also observe a similar tendency in their studies of Korean and Russian learners of English, thus to mark specificity rather than definiteness appears to be a general tendency for learners of [-ART] languages. Furthermore, as Ionin & Wexler (2003) and Ionin, Wexler & Ko (2003) claim, since a language such as Samoan uses articles to distinguish specific and non-specific entities, the use of specificity seems to be a natural option for L2 learners.

6. Conclusion

This paper has examined the article system of Japanese learners of English in the light of the Missing Surface Inflection Hypothesis (Prévost & White 2000). Having examined the learners' L1, Japanese, I have argued that the underlying knowledge of definiteness and count/mass distinctions, which are necessary for the acquisition of the English article system, are present in their L1. Therefore, the problem must lie in the mapping of the knowledge onto the surface forms of the articles in English, which is consistent with MSIH. Moreover, the data from my experiment have demonstrated that indeed the learners have a good understanding of the English article system. The learners appear to realize that singular count nouns require an article to become an argument in English, and the higher level learners use *the* and *a/∅* to distinguish definiteness. Thus, the empirical data also indicates that the learners have definiteness and count/mass distinctions in their ILG, though they may or may not appear in the surface forms in more spontaneous production. Additionally, although it seems that the Japanese learners do not manage count and mass nouns in the same way as English does, the data suggests that the use of *a* with mass nouns is nevertheless systematic.

The use of specificity in their article system, however, needs to be examined with caution. Subject J1, who apparently used *the* only in specific contexts, told me that s/he was taught to use *the* for a sentence with a relative clause. Since most of the specific contexts in this task contain relative clauses, it is unclear whether the learners are indeed sensitive to specificity distinctions or simply apply such instructions which invoke syntactic construction types. Thus, I suggest that the use of relative clauses be avoided in this type of experiment. In addition, it would be interesting to measure subjects' reading time word by word to examine how they cope with the task and whether they behave differently from native controls.

Despite the limitations of the task, I hope to demonstrate, as a first step to investigate why the English article system is difficult for learners of [-ART] languages, that in the case of Japanese learners of English, the relevant knowledge is present in their L1, thus the problem appears to be the mapping of the knowledge onto the surface forms.

Further research needs to examine whether definiteness and count/mass distinctions are linguistically encoded also in other [-ART] languages, thus the problem for all the learners of [-ART] languages is the learning of surface forms, or whether the acquisition of these distinctions itself is a problem for English L2 learners from other [-ART] languages.

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Appendix Examples of the sentences in the experiment

(1) Anaphoric uses (*the*)

A: Come on! We've been in this shop for hours.

B: I can't make up my mind. Which shirt do you like best?

A: I prefer _____ shirt with stripes

(2) Encyclopaedic uses (*the*)

A: I went on holiday to Egypt last summer.

B: Did you see any interesting monuments?

A: Yes, I saw _____ Pyramids.

(3) Larger situation uses (*the*)

A: When you make cakes you should mix them well.

B: Why is that?

A: To stop _____ flour from going into lumps.

(4) [-def +sp] context (*a/ø*)

A: Excuse me.

B: How can I help?

A: I would like to buy _____ CD that I have been trying to find for ages.

(5) [-def -sp] context (*a/ø*)

A: Rose is happy.

B: Why?

A: She got _____ car for her birthday. I wonder what it looks like?

Notes

¹ Earlier versions of this paper were presented at PacSLRF 2006 Brisbane and UQ Linguistic Seminar (September 2006). I'd like to thank the audiences, especially Louise Jansen, Bonnie D. Schwartz and Shigenori Wakabayashi, for their valuable comments. I'd also like to thank all the participants for the experiment in this study. I am greatly thankful for Michael Harrington, Mary Laughren, Ken-ichi Hashimoto and anonymous reviewers for their insightful feedback, though all the errors are surely my own.

² An anonymous reviewer casts doubt on equating [+arg] nouns to mass nouns and [+pred] nouns to count nouns, since a mass noun can be used as a predicate (e.g. *this liquid is water*) and a count noun can be in an argument position (e.g. *the/a teacher is bald*). For the purpose of this study, however, since I am adopting Chierchia's hypotheses to assess the influence of parameterization in the nominal domain, I'd also like to follow his assumption that [+arg] nouns are mass and [+pred] nouns are count (as is quoted above). Accordingly, it can be argued that the predicate use of mass nouns is a case of predicativization. A count noun in an argument position is a case in point of how articles make a count noun an argument; **Teacher is bald*.

³ Or *some*. However, *some* is excluded from the present discussion because a) it is not obligatory in a sense that *a/∅* is obligatory, and b) it is not included in the experiment below (Hawkins et al. 2005) thus not relevant to the present purposes, though it will be necessary for more detailed analyses of count/mass distinctions in English.

⁴ Jackendoff (1992) also takes into account the notion of "internal structure" ([±i]). Since the status of [±i] does not affect the choice of *a/∅*, it is not included in the discussion.

⁵ Abbreviations in this paper: ACC = accusative marker, CL = classifier

⁶ Except for the kind-reading; e.g. "I had five different kinds of water today".

⁷ This observation is made based on the discussion of *-de* in Chinese (Cheng & Sybesma 1999).

⁸ The discussions are in Nemoto (2005) and Watanabe (2006).

⁹ As this may sound confusing to some readers, I'd like to reiterate the point that what learners will have to figure out is *which uses* of nouns belong to [+arg] or [+pred], rather than *what nouns* as many nouns in English can be used as both count and mass nouns depending on the context. I'd like to thank an anonymous reviewer for reminding me of the importance of clarifying this point.

¹⁰ J5, the lowest proficiency learner, is excluded from this analysis because this subject used the indefinite article with almost all mass nouns in the indefinite contexts.