Interpreting Bare Nominals in L2 Japanese

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1. Introduction

The present study examines the link between morphosyntax and the acquisition of aspect in second language learners. The study was inspired by Chierchia’s (1994) proposal that learners use a form of morphosyntactic bootstrapping in the acquisition of the mass/count distinction. Specifically, Chierchia argued that the morphological plural is the key factor that allows a learner to determine whether a noun is count or mass. The presence of plural morphology will allow the learner to realize she is acquiring a language like English that morphosyntactically distinguishes mass from count nouns, unlike a language like Japanese that does not. Secondly, within a language such as English, the plural marker will allow the learner to determine for a given noun whether it is count or mass.

This study extends this investigation of the link between morphosyntax and semantics by focusing on the acquisition of (a)telicity by English native speakers learning Japanese as a second language. In particular, the study focuses on how learners of Japanese interpret bare nouns such as kado ‘card’ that obligatorily display count noun morphosyntax in English. In Japanese, a bare noun such as kado is ambiguous with respect to number and therefore a verb phrase such as kado-o kakimashita ‘wrote card’ can be interpreted as either telic ‘wrote the cards’ or atelic ‘wrote cards’ depending on the particular context. I provide experimental evidence that the interpretation of a VP such as kado-o kakimashita ‘wrote card’ presents difficulty to learners of Japanese and argue that the difficulty stems from the fact that there is no overt morphosyntax that serves to cue the interpretation. In the absence of morphosyntactic evidence and in the presence of L1/L2 differences, the learners of Japanese confront a difficult learnability scenario.

1.1 Composing telicity in English and Japanese

Telic events encode an inherent endpoint (cf. Rosen, 1999 for review of the literature on event structure). In English and other Germanic languages, the presence of a direct object that specifies some specific quantity is necessary to derive a telic interpretation (Borer, 2005; Tenny, 1994; Ritter and Rosen, 1998; Verkuyl, 1972, 1993). The contrast in behavior between (1) and (2) shows that a bare plural direct object such as letters is most compatible with an atelic reading while a direct object that indicates a specific quantity such as the letter or two letters is most compatible with a telic reading.

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2 It is beyond the scope of the present study to address whether languages like Chinese and Japanese distinguish mass from count nouns at the level of the classifier (Cheng and Sybesma, 1999).

3 Compatibility with the adverbial phrases in an hour and for an hour is one test used to distinguish atelic and telic verb phrases. Telic verb phrases are generally more compatible with in an hour and atelic verb phrases are generally more compatible with for an hour.

(1) Olivia wrote letters for hours/for an hour. (atelic)
(2) Olivia wrote two letters/the letter in an hour/for hours (telic).

In Germanic languages telicity can also be encoded via goal prepositional phrases. With certain verbs such as *carry*, the presence of a direct that specifies some specific quantity is not sufficient to derive a telic interpretation as is shown in (3). However, the presence of the goal PP *to the car* in (4) serves to delimit the event by adding an endpoint; the entire VP *carry the bags to the car* is then interpreted as telic.

(3) Victoria carried the bags for five minutes/in five minutes. (atelic)
(4) Victoria carried the bags to the car in five minutes/for five minutes. (telic)

In previous work on the acquisition of aspect researchers have examined whether learners realize that the morphosyntactic form of the direct object is important with respect to the calculation of telicity. The primary focus has been on the contrast between Germanic languages, which encode telicity in the direct object noun phrase, versus Slavic languages that do not. The two types of languages have been analyzed as representing two different parametric options with respect to telicity (Borer, 2005; Slabakova, 2001). In work with first language learners, Van Hout (1998, in press) proposed that it is easier to acquire telicity in the Slavic languages where telicity is encoded via an overt aspecual marker as opposed to the Germanic languages where the morphosyntax of the direct object is important. In work with L2 learners, Slabakova (2001) argued that Slavic learners of English initially have difficulty realizing that the direct object matters with respect to telicity calculation, but at more advanced levels perform at the level of native speakers.

The present study takes a slightly different approach, focusing on a language pair that is on the same side of the telicity parameter. Both English and Japanese encode telicity syntactically via the combination of an eventive verb and a quantified direct object or a verb phrase and a goal PP as was shown in (2) and (4) for English. The comparable Japanese examples in (5) and (6) show the interpretations are similar with respect to telicity.

(5) Sam-wa ichi-jikan-de /ichi-jikan futatsu no tegami-o kakimashita.
Sam-TOP one hour in / one hour for two GEN letter-ACC wrote
Sam wrote two letters in an hour/for an hour.

(6) Keiko-wa go-fun-de /go-fun-kan futatsu no bagu-o kuruma made hakobimashita.
Keiko-TOP five minutes in / five minutes for two GEN bag-ACC car to carried
Keiko carried two bags to the car in five minutes/for five minutes.

However, as was pointed out earlier, English and Japanese differ at the level of the NP/DP in the morphosyntactic form that they allow the direct object to take. English obligatorily marks the singular/plural distinction as is shown in (7) as well as the mass/count distinction, as is shown in (8) and (9). The example in (9) shows that in English, bare singular count nouns cannot appear in argument position.

(7) John read books/the books/two books. (count)
(8) John drank juice. (mass)
(9) *John read book. (count)

Japanese, on the other hand, freely allows bare nominals in argument positions as is shown in (10). Japanese also does not have plural morphology. Bare nouns in Japanese are underspecified with respect to number. In order to explicitly encode number, a classifier must be used as in (11). Japanese also does not morphosyntactically distinguish mass from count nouns as can be seen by comparing (10) and (12).
These crosslinguistic differences in the nominal system have received a lot of attention in the theoretical literature since Chierchia’s influential (1998) paper. Chierchia’s original account posited a semantic parameter: in languages like Chinese and Japanese all NPs are individuals (mass) while in a language like English, nouns can be one of two types, individuals (mass) or predicates (count). More recently, Déprez (2005) proposed that the semantic denotation of all nouns in all languages is the same: all nouns are individuals or kinds and are underspecified with respect to number (cf. Borer, 2005). Languages differ with respect to plural morphology. The richness of plural morphology in a particular language determines whether or not the syntactic node NumP is obligatorily projected or not. In a language like English, NumP obligatorily projects for count nouns even when the noun is singular. In order to be satisfied, NumP must contain a counter, which may be an overt numeral, determiner or plural morphology. Crucially, in a language like English, an NP is obligatorily interpreted as either singular or plural. In a language like Japanese, on the other hand, projection of NumP is optional and even when it does project, there is no need for an explicit counter. Therefore, number is underspecified: bare nouns can be interpreted as singular or plural (cf. 10).

The goal of this study was to investigate what consequences these differences in the nominal systems have for the acquisition of telicity by English-speaking learners of Japanese. If a transfer model such as Schwartz and Sprouse (1996) is assumed, the following predictions can be made: learners should not have difficulty with the interpretation of verb phrases with overt numeral classifiers as in (11) or with bare mass nouns such as jyusu as in (12). The sentence John drank three glasses of juice receives a telic interpretation in both English and Japanese and the sentence John drank juice receives an atelic interpretation in both languages.

However, it was predicted that learners would have difficulty with the bare count noun as in (10), repeated below in (13). The sentence in (13) is ambiguous and can receive either a telic or atelic interpretation depending on the context.

(10) Sam-wa tegami-o kakimashita. (count)
   Sam-TOP letter-ACC wrote.
   Sam wrote letter.
   ‘Sam read a/the/some book(s).’

(11) Sam-wa san bai no jyusu-o nomimashita. (mass)
   Sam-TOP three CL GEN juice-ACC drank.
   ‘Sam drank three glasses of juice.’

(12) Sam-wa jyusu-o nomimashita. (mass)
   Sam-TOP juice-ACC drank.
   ‘Sam drank juice.’

Nouns in English cannot be ambiguous with respect to number and therefore verb phrases in English are generally not ambiguous with respect to telicity. Due to these crosslinguistic differences, the learner of Japanese may be faced with a difficult learnability scenario as there is no overt morphosyntax in Japanese that will cue the interpretation. An interpretation task was developed to target these specific contexts.
2. Methodology

2.1 Participants

There were two groups of participants: 18 English-speaking learners of Japanese and 21 Japanese native speakers who were tested in Japan. The L2 Japanese participants were American undergraduates studying in the U.S. who had taken at least one full year of Japanese. The Japanese learners were given the listening comprehension section of the Level 3 Japanese government examination as a proficiency measure. Learners were initially divided into two groups on the basis of their scores. However, because the two groups did not perform differently on the experimental task, the groups were then combined for the purpose of the analyses.

2.2 Interpretation Task

The interpretation task targeted bare nominals. Participants looked at pictures and listened to short stories in Japanese. Two versions of each story were presented: a version in which the event came to completion (telic) and a version in which the event was terminated (atelic). Following each story, participants were presented with a sentence and were asked to judge on a scale of 1-5 whether or not the sentence was compatible with the story (5 being most compatible).

Two types of bare nouns were tested: ‘count mass’ nouns such as *kado* (see 14a) and *bagu* (see 15a) that display count noun syntax in English and ‘mass mass’ nouns such as *jyusu* (see 16a) that can appear bare in argument position in both English and Japanese (terminology from Doetjes, 1997). Examples of each of the three types of stories are presented in (14-16).

(14) Count

Today is Ken’s birthday. He received four presents. He wants to write thank you cards to his friends. Ken writes three cards. Then he starts to write the last card.

Telic: He finishes the last card. Then he gives the cards to his friends.
Atelic: But Ken has to go to school. He cannot finish the fourth card.

Predicted Judgments for Japanese Native Speakers

<table>
<thead>
<tr>
<th></th>
<th>Telic</th>
<th>Atelic</th>
</tr>
</thead>
<tbody>
<tr>
<td>(14a) Ken-wa tanjōbi-ni kado-o kakimashita.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Ken wrote card on his birthday.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(14b) Ken-wa tanjōbi-ni yon mai no kado-o kakimashita.</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Ken wrote four card on his birthday.</td>
<td></td>
<td></td>
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</tbody>
</table>

(15) Count + Prepositional Phrase

On Thursday Susan leaves her house to go to the airport. She needs to carry her three bags from her house to the car. She carries two bags to the car.

Telic: Then she carries the last bag to the car.
Atelic: The last bag is very heavy. She cannot carry it all the way to the car.

Predicted Judgments for Japanese Native Speakers

<table>
<thead>
<tr>
<th></th>
<th>Telic</th>
<th>Atelic</th>
</tr>
</thead>
<tbody>
<tr>
<td>(15a) Satoko-wa nichiyōbi-ni kuruma made bagu-o hakobimashita.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Satoko carried bag to the car on Sunday.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(15b) Satoko-wa nichiyōbi-ni kuruma made mitsu no bagu-o hakobimashita.</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Satoko carried three bag to the car on Sunday.</td>
<td></td>
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4 Throughout the rest of this paper I will refer to the ‘count mass’ nouns as ‘count’ and the ‘mass mass’ nouns as ‘mass.’
Mass
John drinks a lot. After school he pours three glasses of juice. He drinks two glasses of juice. Then he starts to drink the third glass.

Telic: He finishes the third glass of juice. Then he puts the empty glasses in the sink.
Atelic: He cannot finish the third glass. He pours the rest of the juice in the sink.

<table>
<thead>
<tr>
<th>Predicted Judgments for Japanese Native Speakers</th>
<th>Telic</th>
<th>Atelic</th>
</tr>
</thead>
<tbody>
<tr>
<td>(16a) John-wa gakkō no ato iyusu-o nomimashita.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>John drank juice after school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(16b) John-wa gakkō no ato san bai no iyusu-o nomimashita.</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>John drank three glass of juice after school.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It was predicted that learners would have more difficulty with the count nouns such as kado in (14) and bagu in (15) because there is no morphosyntactic evidence that will cue the learners as to the interpretation of the bare noun. Note that sentences (14a) and (15a) should be given scores such as 5 even on the atelic contexts because the stories in this experiment always involve more than one object. For example, in the story in (14), Ken has to write four cards but on the atelic context, only manages to write three of them. The Japanese sentence ‘Ken wrote card’ in (15a) is compatible with this story as long as one card has been completely written. The learner of Japanese needs to determine the reference of the word kado. The learner needs to decide whether kado refers to a single card or to all of the cards specified in the story. It was predicted that the learners would have difficulty assigning this reference.

On the other hand, bare mass nouns such as iyusu in (16) display similar morphosyntax in English and Japanese and therefore no difficulty was predicted with these sentences. Sentences with classifiers (see 14b, 15b, 16b) were included as controls in order to provide evidence that the learners know that Japanese can encode telicity via a quantized direct object or a goal prepositional phrase. No difficulty was predicted for the classifiers.

3. Results

3.1 Simple transitive VPs with bare nouns

Results for the sentences targeting simple transitive verb phrases (14, 16) are presented first. Results for the bare nominals will be presented first followed by results for the control sentences with classifiers in section 3.2.

Results for the sentences with bare mass nouns such as iyusu are summarized in Figure 1 on the following page. The graph presents mean responses to both the telic and atelic contexts. Both learners and native speakers performed accurately with bare mass nouns, giving equivalent scores to both telic and atelic contexts. A repeated-measures ANOVA confirmed that there were no significant differences between responses to telic and atelic contexts.

Results for the bare count nouns are presented next in Figure 2. While native speakers performed accurately, the L2 Japanese learners had difficulty with bare count nouns on the atelic context. A repeated-measures ANOVA revealed a significant effect for telicity (F(1, 37) = 14.431, p < .01) and a significant interaction between telicity and proficiency level (F(1, 37) = 9.848, p < .01). Follow-up analyses looking at each group independently revealed that the difference between the atelic and telic contexts was significant only for the L2 learners (p < .01).

As predicted, the learners had difficulty with the interpretation of the bare count nouns. A sentence such as (14a) should be compatible with both the telic and atelic contexts but the learners have difficulty accepting a sentence such as ‘Ken wrote card’ on the atelic context when not all of the cards have been written. The results suggest that learners incorrectly interpret the bare noun as a telic definite plural, referring to all of the cards specified in the story. It is important to note that the learners’ target-like performance on the mass nouns indicates that the learners’ difficulty with the
count nouns is not due to simply conflating transitivity with telicity. The learners are able to accept (16a) ‘John drank juice’ on the atelic context.

Figure 1. Mean responses to sentences with bare mass nouns with telic and atelic contexts

![Bare Noun: Mass](image1)

Figure 2. Mean responses to sentences with bare count nouns with telic and atelic contexts

![Bare Noun: Count](image2)

3.2 Simple transitive VPs with classifiers

Results for the simple transitive VPs with classifiers are presented next. Figure 3, on the following page, summarizes the results for the classifiers + mass nouns (16b) and Figure 4 presents the results for the classifier + count noun sentences (14b). The two graphs show that both native speakers and learners of Japanese clearly distinguish the telic and atelic contexts when a classifier is present. Results of separate repeated-measures ANOVA indicated that the learners performed at the level of native speakers. As predicted, when the target sentences are not ambiguous with respect to number, the learners have no difficulty in assigning the correct interpretation.
3.3 Transitive VPs + Goal PP

Results for the transitive VPs with the goal PP (cf. 15) are presented in Figures 5 and 6 on the following page. Figure 5 summarizes the results for the bare count nouns with goal PPs as in ‘carry bag to the car’ in (15a); Figure 6 summarizes the results for the sentences with the classifier phrase as in (15b).

The graph in Figure 5 shows that L2 learners again have difficulty interpreting the bare count noun on the atelic context. Although the L2 learners give significantly higher scores on the telic context \( p < .01 \), the native speakers do not distinguish between the two contexts. In contrast, the learners perform at the level of native speakers when the classifier phrase is added as in shown in Figure 6.

In summary, as predicted learners only have difficulty when confronted with the interpretation of a bare count noun such as \textit{bagu} in (15a). They are less willing than the native speakers to accept these sentences on the atelic context. This result suggests that some of the learners incorrectly take the reference of the bare noun \textit{bagu} to be all of the bags specified in the story.
Figure 5. Mean responses to sentences with bare count nouns + goal PP with telic and atelic contexts

![Bare Count Noun +PP](image)

Figure 6. Mean responses to sentences with classifier + goal PP with telic and atelic contexts

![Classifier + PP](image)

4. Discussion

In summary, the results show that learners have difficulty in only one area: the interpretation of bare count nouns such as *kado* in (14a) and *bagu* in (15a) with atelic contexts. Bare count nouns in Japanese are most likely difficult for English native speakers because count nouns in English obligatorily specify an explicit counter and are not ambiguous with respect to number. Bare nouns in Japanese, on the other hand, ambiguously refer to singular or plural entities. The results of this experiment suggest that in the absence of morphosyntactic cues, the Japanese learners appear to interpret the bare count noun as a definite plural (*the cards*). Therefore, some of the learners reject sentences such as ‘Ken wrote card’ if not all of the cards have been completely written. The main question is why the learners assign this particular telic interpretation.

On a straight transfer account using the Déprez (2005) analysis, English native speakers would project an obligatory NumP for count nouns in Japanese even though Japanese does not require this particular projection. In order to satisfy the NumP, some kind of explicit counter would have to be
specified (an overt determiner, a numeral, plural morphology, etc.). This means that the NumP could be satisfied with the L2 learners interpreting the Japanese equivalent of ‘Ken wrote card’ as for example, Ken wrote one card or Ken wrote cards. However, if the learners interpret ‘Ken wrote card’ as Ken wrote one card or Ken wrote cards, then they should still be able to accept the bare count noun on the atelic context because at least one card had been completely written. Therefore, while this account can explain why the bare count noun presents a locus of difficulty for English native speakers, it does not appear to fully explain the specific interpretation that the learners assign.

It is possible that in the absence of morphosyntactic evidence the learners tend to rely on the context, incorrectly analyzing the bare noun as referring to all of the entities specified in the story. Although relying on the context brings the L2 learners to derive an incorrect interpretation, relying on the context is in general a reasonable approach. Déprez (2005) points out that native speakers of Haitian Creole rely heavily on context to interpret bare nouns. According to her informants, the interpretation of (17) is preferably plural while the interpretation of (18) is preferably singular, just because of what we know about books and houses and how much they cost.

(17) John achte liv pou Pòl
John bought book for Paul
John bought books for Paul.

(18) John achte kay pou Pòl
John bought house for Paul
John bought a house for Paul

The examples in (17) and (18) also highlight the fact that the input to the learners is potentially very difficult to decipher. In Japanese, the interpretation of bare nouns also depends on context. This experiment could have included a different type of story context where Ken has to write only one card. On the atelic context, only half of one card would have been completed. Several Japanese informants have told me that, in this case, they would not accept the Japanese equivalent of “Ken wrote card.” Therefore, in referring to a context where there is only one card to write, the VP with a bare count noun is unacceptable if the event is terminated. However, the same VP is acceptable on a context where there are several cards to write and at least one has been completed, as in this experiment. It is possible then that the learners overgeneralize from the singular contexts to the plural contexts.

It is likely that the difficulty with bare count nouns stems from a interaction of factors. L1 influence likely plays a role. Bare count nouns must be overtly specified for number in English. The fact that the there is no morphosyntactic evidence in Japanese to cue the interpretation causes difficulty and may encourage the learner to rely on the context when trying to figure out the referent of the bare noun. While I’ve argued that this strategy is reasonable, it leads the learners to derive the wrong interpretation. I’ve also proposed that the input to the learners is potentially quite difficult to decipher.

The results of this study have shown that interesting developmental patterns emerge when we consider the interpretation of bare nominals. Up until recently, a lot of research in L2 acquisition focused on learners’ deficiencies in overt morphology in languages such as English or German. However, in the realm of telicity, it may be that a lack of morphology in the target language actually presents a more challenging learnability scenario. In line with Chierchia’s (1994) proposal that learners use overt morphology as a bootstrap into the mass-count distinction, I propose that learners also rely on overt morphology as a bootstrap into the telic-atelic distinction. Preliminary results of a parallel study with Japanese learners of L2 English appear to provide preliminary support for this proposal (Gabriele, 2006).

In conclusion, the role of bare nominals in the encoding of telicity presents an interesting area for future research with respect to both acquisition and syntactic/semantic theory. In the realm of acquisition, it is clear that interesting developmental patterns emerge even when we consider two languages that both encode telicity via the direct object. It is therefore worth looking beyond the Slavic/Germanic contrast at more subtle differences in the nominal system.
The same holds true for theoretical accounts of telicity as well. Interestingly, the Japanese informants who said they would reject a sentence such ‘Ken wrote card’ if Ken only had one card to write and did not complete it, also said that they would accept a sentence such as ‘Ken drank juice’ if Ken only had one glass of juice and he didn’t finish it. This reported contrast between bare mass and bare count nouns in Japanese presents a challenge to purely syntactic accounts of telicity and suggests that we need to develop a better understanding of the role of the semantics of the direct object in the structure of telic events (Filip, 2005; Yoshida, 2006).

References


