HOW DO L1 JAPANESE SPEAKERS COMPUTE TELICITY IN L2 ENGLISH?[*]

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1.   Introduction

It has been reported that, in adult L2 learners, the acquisition of the semantics of aspect (telic vs. atelic interpretation) is not contingent upon the acquisition of relevant morphological markers of grammatical aspect (perfective vs. imperfective) (Montrul & Slabakova (2002) and Slabakova (2003, 2005)). Our research examines the acquisition of telicity by intermediate Japanese learners of English through the *neutral perfective* reading of past perfective predicates. The current study examines two points: first, it investigates whether adult L2 learners can derive telicity of English single past sentences as a function of its object determiner phrases (DPs, bounded/unbounded), and second, it examines the relationship between the acquisition of the semantics of telicity and the relevant functional morphology, i.e. determiners and number categories which influences the computation of telicity. The results indicate a progression toward the target L1 English-like representation of telicity and the acquisition of semantic computation of telicity does not necessarily correlate with the learners' perfect usage of the morphology of object boundedness.

2.   What is the Neutral Perfective reading?

The term *neutral perfective* (Singh 1991, 1998) describes a capacity of a perfective predicate in some languages to refer to an event that did not reach its completion point. Consider the difference between English examples in (1) and the Japanese equivalents in (2).

(1)   a. √   Lisa erased the star.
       b. #   Lisa erased the star but some of it still remains.

(2)   a. √   Risa-wa   hoshi-o   keshita
              Lisa-Top   star-Acc   erased
              Lisa erased (a/the) star(s)

       b. √   Risa-wa hoshi-o keshita keredo mada nokotteiru
              Lisa-Top star-Acc erased but   still   remains
              Lisa erased (a/the) star(s) but it still remains.

In English (1a) the past perfective predicate *erased the star* implies that the star has been erased completely, as confirmed by the fact that the continuation *but some of it still remains* in (1b) is strongly infelicitous. On the other hand, the Japanese equivalent (2a) is not only compatible with a scenario in which the star has been erased completely (a telic reading), but also with a scenario where the star is erased partially (an atelic reading) as witnessed by a well-formed (2b). Hence, Japanese past perfective predicates have the neutral perfective reading. In addition to Japanese, this phenomenon (also sometimes termed as the *event cancellation* phenomenon, e.g. Tsujimura, 2003) was observed in Chinese (Tai 1984, Soh and Kuo 2005), Hindi (Singh 1991, 1998) and Thai (Koenig & Muansuwan, 2000).

Given that the neutral perfective reading is available with past predicates in Japanese but not in English, Japanese learners of English must learn to reject simple past predicates with incomplete events in English. This may pose a challenge for Japanese learners of English since they are required to go from a superset to a subset of readings available to a past accomplishment predicate in the absence of explicit instruction or negative evidence.

The remainder of this paper is organized as follows. Section 3 sketches one of proposed analyses of the neutral perfective reading. Section 4 discusses potential pitfalls in calculating telicity of English predicates that exist for Japanese learners of English. Section 5 presents our experiment that aims at investigating semantic representation of telicity in intermediate Japanese learners of English. Section 6 presents our conclusion.

3.   Object boundedness and computation of telicity

This section shows a semantic approach of how the neutral perfective reading of an eventive predicate is derived. It also shows how telicity is computed in English and Japanese and discusses differences in the availability of the neutral perfective reading in these languages.

The fact that properties of object DPs are critical for computing telicity of predicates has been prominently discussed in the literature, notably by Verkuyl (1972, 1989, 1993). Under this view, the telicity of a predicate critically depends on the type of object DP that it contains. Consider sentences in (3).

(3)   a.   Ken built houses.
       b.   Ken built three/the houses.

Only the sentence (3)a, but not (3)b, is true in a situation in which Ken built two houses completely and a third one incompletely. In particular, (3)b is false as it requires that all three houses (or all houses in question) are built completely. Note that the only difference between (3)a and (3)b is the object DP which influences the interpretation of telicity. Hence, one may conclude that the properties of object DPs play a role in determining the telicity of the corresponding predicate. Predicates such as (3)b that contain a bounded DP are only compatible with a telic interpretation, i.e. they can denote complete events but not incomplete events. When an object DP is unbounded, as in (3)a, then the relevant predicate is compatible with either a telic or an atelic reading. In what follows we provide a possible formalization of this idea by Soh & Kuo (2005)

which utilizes Jackendoff's (1991) classification of nominals and Chierchia's (1998) observations on cross-linguistic differences in bare nominals.

Jackendoff (1991) classifies all nominal arguments in English in terms of binary conceptual features *boundedness* and *internal structure*. The boundedness feature ([+/-b]) reflects whether or not boundaries of an entity are in view or are of concern. The internal structure feature ([+/- i]) distinguishes whether an entity can be divided into individual members. The features are exemplified in 0:

(4) [+b, - i]:   individuals   (*a pig*)
     [+b, +i]:   groups   (*a committee*)
     [- b, - i]:   substances   (*water*)
     [- b, +i]:   aggregates   (*buses, cattle*)

For example, a singular count noun (*a pig*) and a mass nouns (*water*) differ only in the value of the boundedness feature ([+b] vs. [–b] respectively). A count noun is bounded since the boundaries of an entity are clearly definable and visible whereas a mass noun is unbounded since its boundaries are not in view. Both singular count and mass nouns are marked as [-i] since neither of them can be subdivided into individual members. Plural count nouns (e.g. *buses*) are unbounded due to the fact that the entity *buses* does not have precise limits, but they are marked as [+i] as they represent a collection of individual members.

Note that it is the value of the feature [+/-b] (but not of the feature [+/-i]) on the object DP that is critical for calculating the telicity of the predicate. This is exemplified in (5).

(5) a. Ken ate an apple.
         Object DP: [+b, -i]; Predicate interpretation: √telic   #atelic

     b. Ken ate custard.
         Object DP: [-b, -i]; Predicate interpretation: √telic   √atelic

The only difference between the two sentences in (5) lies in the value of the boundedness feature of the object DP. The DP *an apple* in (5)a is [+b], whereas that of *custard* in (5)b is [-b]. This change in the setting of the boundedness feature is sufficient to yield differences in the telicity of the overall predicate: (5)a is only compatible with a telic interpretation, while (5)b is compatible with both a telic and an atelic interpretation.

In addition, Soh and Kuo's (2005) theory makes use of two assumptions. The first assumption is that various functional heads that project within a DP, e.g. determiners, plural markers and numerals, are functions that may change the value of the boundedness and internal structure features on the complement noun or phrase. Second, Soh & Kuo adopt Chierchia's (1998) idea on cross-linguistic differences of bare nominals: English bare nouns may be either count or mass, whereas all nouns in Japanese are mass.

The first assumption is illustrated by the derivation for English DP *an/the apple* in (6)a. The bare noun *apple* enters the derivation with the feature [+b]. In English (and other languages with overt determiners and number morphology,

Déprez 2005) the number and the D-head projections are obligatorily.[1] We make an adjustment to Soh & Kuo's analysis and consider that determiners have a function that changes the unbounded feature to the bounded feature, i.e., Det: [-b] → [+b], whereas the plural marker -s in English has an opposite effect, i.e. -s: [+b] → [-b].[2] Hence, in this derivation the feature [+b] on the bare nominal remains unchanged when both the Number phrase (because it is singular) and the DP (because it is already [+b]) are projected. The resulting DP *an/the apple* has the value [+b] at the uppermost level.

(6)   Derivation of DPs '*an apple*' in English and '*ringo*' in Japanese

(a) Singular Count Noun
        an/the apple in English
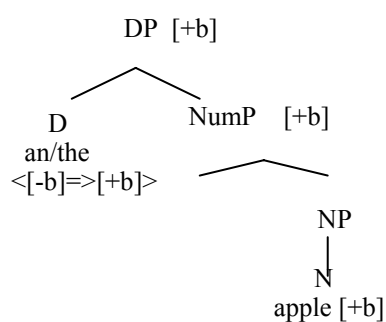
(b) Bare Noun
        ringo 'apple' in Japanese

DP [+b]

D
an/the
<[-b]=>[+b]>

NumP [+b]

NP

N
apple [+b]

DP [-b]

(NumP [-b])

NP

N
ringo [-b]
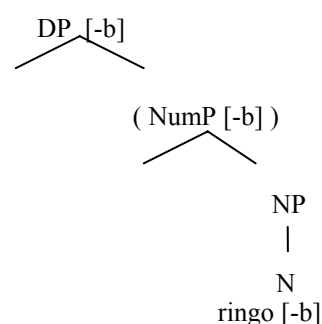
The second assumption, illustrated in (6)b, shows the derivation for the Japanese DP *ringo* 'an/the/∅ apple(s)'. The Japanese bare noun *ringo* 'apple' enters the derivation with a feature [-b]. No other categories are projected until the DP level and, consequently, no feature change takes place. As a result, the resulting DP is still [-b].

The difference in the setting of the boundedness feature on the DP results in the differences in telicity of the predicate that take this DP as an object (provided that the equivalent verbs are used in the two languages). DPs that are marked as [+b] yield a predicate that require an event completion, i.e. they only have a telic reading. DPs that are marked as [-b] give rise to predicates that are unspecified regarding the event completion, i.e. they can have either a telic or an atelic reading. This is how the *neutral perfective* reading in Japanese is generated.

4.   Computation of telicity in L2 & Research Questions

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[1] See Gabriele (to appear) for an application of Déprez's (2005) analysis to the field of second language acquisition.

[2] In Soh and Kuo's (2004) original analysis, a determiner (a/the/this) changes the feature [-b] to [+/-b], i.e., Det: [-b]→[+/-b].

As shown in sections 2 & 3, the difference in availability of the neutral perfective reading is derivable from differences in the nominal systems in English vs. Japanese. In terms of first language acquisition then, acquiring correct settings for determiners and plural markers within DP presumably yields a correct semantic interpretation of the predicate that contains that DP. Our experiment was designed to investigate how telicity is calculated by second language learners, especially adult Japanese learners of English and aimed at providing answers to the following questions:
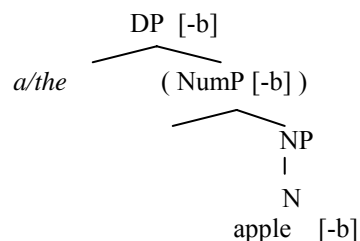
Q1:   Can Japanese learners of English learn to derive telicity of English accomplishment predicates as a function of its object determiner phrases in the absence of explicit instruction? In other words, will Japanese learners of English learn to reject the neutral perfective reading in English?

Q2:   Does acquisition of morphology (determiner/plural *–s*) correlate with the acquisition of the semantics of telicity?

In order to derive that the neutral perfective reading is not a licit interpretation for a simple past sentence in English, L2 learners need to have access to at least two pieces of information. First, they need to know that the feature [+/-b] of DPs is relevant in calculating the telicity of the overall predicate. This can be achieved through L1 transfer (such information is available in L1 Japanese, as exemplified by Numeral phrases).[3] Second, the learner needs to know that the determiner and the plural heads may affect the value of the boundedness feature of the resulting DP. This step is unlikely to be performed as a result of L1 transfer due to the absence of definite and indeginite determiners and nominal plural marking in Japanese. If so, Japanese learners of English need to learn to correctly project these categories and apply functions associated with these projections.

Before going on to the experiment, let us describe a predicted behavior by Japanese learners of English in the case if they use their L1 Japanese feature settings for the case of an English predicate with a singular bounded object (7).

(7)   Derivation of *an/the apple* by L2 English speaker (if L1 Japanese settings are employed)

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[3] In Japanese, object DPs with numerals such as sangen-no ie 'three houses' are marked as [+b] and yield predicates that are only compatible with a complete event. If so, Japanese speakers possess the information that [+b] value on the DP gives rise to a telic predicate.

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          DP  [-b]
         /\
   a/the    ( NumP [-b] )
            /\
               NP
               |
               N
            apple   [-b]
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       In such case the nominal *apple* will enter the derivation with the feature [-b] based. Further, if Japanese learners of English have not acquired the function of a determiner in English, the feature [-b] will be carried over to the DP level (compare this derivation with a target English derivation in (6)a).This value at the DP level will have the effect that these L2 speakers will incorrectly accept English simple past sentences with incomplete events (the neutral perfective reading).

5.   The Experiment

The study involved 20 Japanese learners of English (L2 English group) as well as 20 L1 English speakers and 20 L1 Japanese speakers who served as monolingual controls. The L2 English participants were classified as low-to-high intermediate level learners based on the results of a placement task which tested participants' English vocabulary, grammar and reading skills (*Oxford University Press and the University of Cambridge Local Examinations Syndicate 2001*).

       During an experimental session the L2 English group and L1 English group performed two tasks: a Morphological task (MT henceforth) and a Truth Value Judgment Task (TVJT; Crain & Thornton, 1998). The L1 Japanese group performed a Japanese version of the task.

5.1   Morphological Task (MT)

The aim of the task was to examine morphological knowledge of the Number category on determiner phrases (i.e., *singular* vs. *plural* distinction). This task was conducted with L2 English learners with L1 English group serving as a control group.

       The task was administered in the form of a pen-and-paper questionnaire. Participants read sentences that contained a blank which they had to substitute with a form of the word that was given in parentheses following each sentence. A sample sentence is shown in (8):

(8)   Lucy has _____ which likes to eat a lot. (cat)   [Condition A]

Correct answer: Lucy has *a cat/ the[4] cat* which likes to eat a lot.

The experimental items were divided into four conditions reflecting a 2×2 design with factors *number* (singular/plural) and *position* (subject/object) of the target word. The target word was always a count noun. In conditions A and C the target word was in the object position in the main clause; a correct answer was conditional on the respondent matching its number with the number on the embedded verb (the embedded clause was always a subject extracted relative clause). In conditions B and D the target word occupied the main subject position and had to agree with the main verb. Conditions A and B required a singular DP (either definite or indefinite) as a correct answer, whereas conditions C and D required a plural DP with or without the definite article for a correct answer.

Twelve sets of stimuli were created and distributed along two presentation lists using a Latin Square Design. All participants were randomly assigned to one of the lists. Each list contained 12 experimental items (3 per condition) interspersed with 18 filler items.

Results

Monolingual L1 English controls showed a ceiling performance on the morphological task. In the L2 English group, 7 out of 20 participants made either zero or one error in 12 experimental trials. Those participants were considered to have achieved a target-like level. The remaining 13 participants produced two or more errors each and were responsible for 97.3% of all agreement errors. Most common errors fell into one of two categories: *Number errors* or *Bare-Singular (Bare-Sg) errors*. Trials with Number errors were cases in which the participant incorrectly used a singular determiner *a* in a plural context or in which (s)he used the plural *-s* (with or without the definite article) in a singular context. Bare-Sg errors stand for an inappropriately used bare singular noun (e.g., *cat*) in either a singular or a plural context. Bare-Sg errors were more frequent than number errors (26 vs. 15 occurrences respectively). Both types of errors are attributable to L1 transfer, as Japanese does not have overt equivalents for the English definite and indefinite determiners or the nominal plural marker *-s*.

5.2   Truth Value Judgment Task (TVJT)

The truth-value judgment task was conducted to investigate the semantic representations which Japanese learners of English assign to English predicates in terms of their telicity. L2 English learners and L1 English speakers (control group) participated in the English version of the TVJT. The L1 Japanese group (control group) participated in the Japanese version of the task which was a translation of the original English version.

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[4] Use of *the*, though not grammatically correct, is treated as correct since the distinction of *a/the* is not crucial for computing telicity because both *a* and *the* yield a telic interpretation.

Participants watched scenarios that were acted out in front of them through use of an animated Power Point presentation. Each story was a combination of a narrated text and actions depicting an event which happened either completely or incompletely. The participant's task was to judge the truth-value of a target sentence in the given scenario. For example, in the *star-erasing* scenario, a girl named Lisa has a drawing of a star on a piece of paper and wants to get rid of that star. So she starts erasing the star with the eraser, and does it either completely (Condition A in Table 1) or incompletely (Condition B in Table 1). The target sentence *Lisa erased the star* then appears on the screen and the participant is asked to judge whether or not the sentence is true in the given scenario.

.   There are 4 conditions in the TVJT which were constructed in a 2×2 design with factors *event type* (complete vs. incomplete) and *number* of affected objects (singular vs. plural). In conditions A and B the critical event was either performed completely (condition A) or incompletely (condition B) but always involved a singular object; accordingly the target sentence contained a predicate with a singular object DP. Conditions C and D followed the same pattern with the difference that multiple objects (2 or 3) were involved and the target sentence contained a plural object DP. The conditions and the predicted behavior by native speakers of English and Japanese are summarized in Table 1. Our initial assumption was that L1 English speakers would accept target simple past predicates with complete events (conditions A & C) and reject them with incomplete events (conditions B & D). L1 Japanese speakers, on the other hand, were expected to accept Japanese equivalents of our target sentences with complete events (conditions A & C) and also with incomplete events (conditions B & D) due to the existence of the neutral perfective reading with past predicates in Japanese.
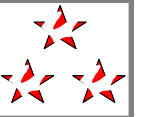

Table 1. Summary of experimental conditions in the truth-value judgment task.

Sixteen stories were created based on 16 different predicates (only a singular version of each predicate is listed): *paint the door, build the house, erase the star, draw the picture, eat the orange, fill the glass, assemble the chair, untie the bow, empty the bottle, remove the cork, circle the star, shred the document, melt the candle, disassemble the table, unwrap the present, type the name*. Four presentation lists were created using a Latin Square Design with each list containing only one condition for a given predicate. All target predicates were accomplishments and contained a bounded object DP (e.g., *a/the star* in the singular conditions and *the stars* in the plural conditions). Each target sentence contained either a singular or a plural version of the target predicate in the simple pst tense.

Participants were run individually or in groups of 2-4 people. They watched a PowerPoint slideshow on a laptop screen or on a projector screen. In addition to 16 experimental stories the experiment also contained 16 filler stories. The experimental session lasted approximately 40 minutes.

Results
The results of the truth-value judgment task for all three groups of participants are summarized in Figure 1.

TVJT Cond A/B/C/D

L1 English   L2 English   L1 Japanese

	Cond A Sg/comp.	Cond B Sg/incomp.	Cond C Pl/comp.	Cond D Pl/Incomp.
L1 English	100.0%	18.8%	100.0%	27.5%
L2 English	94.9%	37.5%	94.7%	55.7%
L1 Japanese	97.5%	58.8%	98.7%	68.8%

Condition
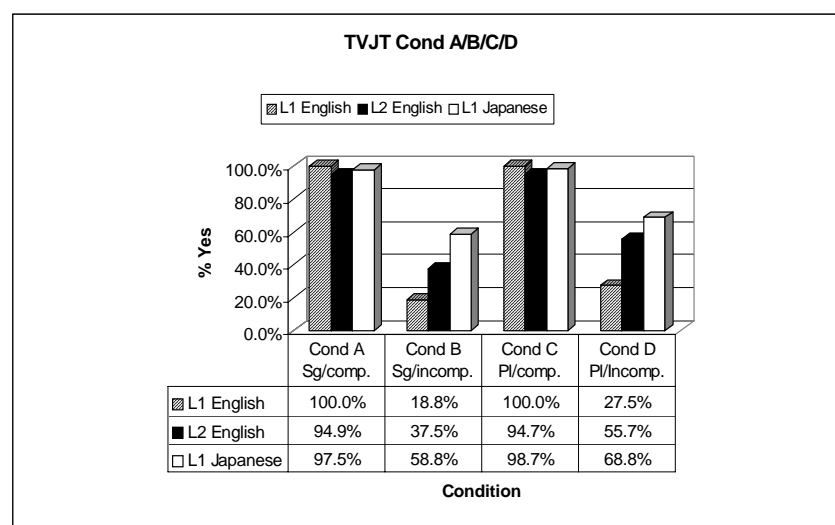
Figure 1. The truth-value judgment task results: percentage of Yes-responses**.**

Starting with the monolingual groups, L1 English speakers overwhelmingly accepted target sentences with simple past predicates with complete events (100% acceptance in conditions A and C). On the other hand, they were reluctant in accepting the same sentences with incomplete events (18.8% acceptance in condition B and 27.5% acceptance in condition D). Overall, the monolingual English group showed an expected performance, i.e., they accepted simple past accomplishment predicates with bounded objects with

complete events, but not with incomplete events. The L1 Japanese speakers showed a similar performance to their monolingual English peers in conditions A and C, i.e., they overwhelmingly accepted target sentences with complete events (97.5% and 98.7% acceptance respectively). In conditions B and D, however, they accepted target sentences significantly more often than L1 English speakers (58.8% and 68.8% acceptance in conditions B and D respectively). A relatively high acceptance rate in conditions B and D confirms the existence of the neutral perfective reading in L1 Japanese.

Results from the Japanese learners of English indicate a high acceptance rate for target sentences in conditions A and C (94.9% and 94.7% respectively) which are comparable to the rates shown by the monolingual groups (1-way ANOVA , conditions A & C: both Fs(2,57) < 2.5, p >.1). In conditions B and D, however, the acceptance rates by the Japanese learners of English are in between the scores by the L1 English or the L1 Japanese speakers and differ significantly from both groups. This is confirmed by the results of a 1-way ANOVA performed with all three participant groups (condition B: F(2,57) = 17.7, p<.001; condition D: F(2,57) = 9.9, p<.001) and the results of pairwise comparisons of L2 English group with L1 English group (2-tail 2-sample t-test, condition B: p<.05, condition D: p<.01) and L1 Japanese group for condition B only (condition B: p<.01, condition D: p>.1). These results suggest that Japanese learners of English move towards the target representation of the semantics of the simple past: although they have not yet reached the target L1 English levels, they succeed in rejecting the neutral perfective reading of past accomplishment predicates in English significantly more often than in Japanese.

Next we would like to discuss the results of conditions B and D broken down by individual predicates. This is done for two reasons. First, we would like to highlight variation in (un)availability of the neutral perfective reading in English or Japanese according to individual predicates. Second, we would like to gain a deeper understanding of the L2 speakers' profile by determining whether the trend observed in the average data is confirmed in the by-item breakdown.

As seen in Figure 1 above, there is some amount of rejection of the neutral perfective reading by L1 Japanese group (i.e., conditions B and D). A potential reason underlying such variation that has been previously noted in the literature (e.g. Soh & Kuo, 2005) could be due to individual predicates. In order to examine the predicate effect we analyzed the results from the truth-value judgment task by individual predicates.
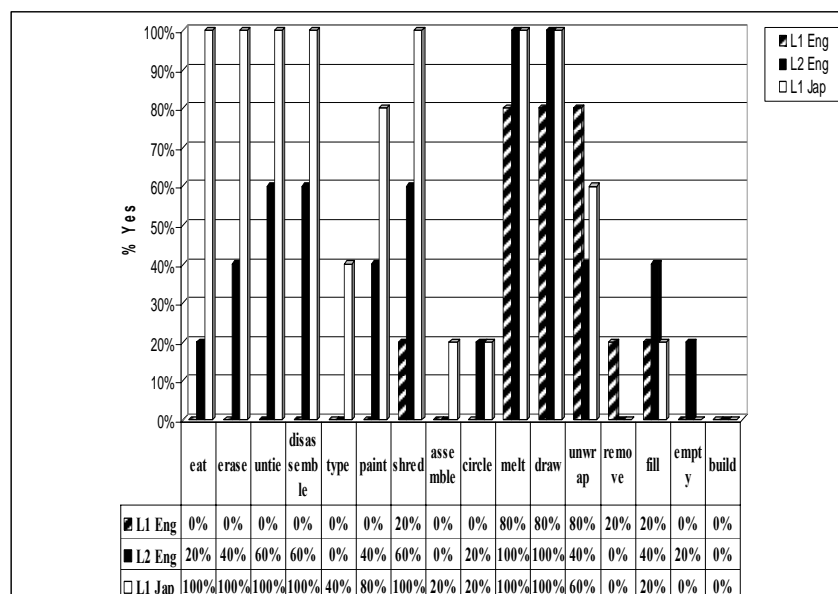
	eat	erase	untie	disas semb le	type	paint	shred	asse mble	circle	melt	draw	unwr ap	remo ve	fill	empt y	build
L1 Eng	0%	0%	0%	0%	0%	0%	20%	0%	0%	80%	80%	80%	20%	20%	0%	0%
L2 Eng	20%	40%	60%	60%	0%	40%	60%	0%	20%	100%	100%	40%	0%	40%	20%	0%
L1 Jap	100%	100%	100%	100%	40%	80%	100%	20%	20%	100%	100%	60%	0%	20%	0%	0%

Figure 2 Breakdown of results of the truth-value judgment task by individual predicates: Condition B

Figure 2 shows the breakdown of the results from condition B by individual predicates. The L1 English data showed a bimodal pattern: for 13 out of 16 predicates English speakers either did not accept the neutral perfective reading at all (*eat, erase, untie, disassemble, type, paint, assemble, circle, build,* and *empty)* or accepted it at a very low 20% rate (*shred, remove* and *fill*). However, with the remaining three verbs (*melt, draw* and *unwrap)* they (somewhat unexpectedly) accepted the neutral perfective reading at a rate higher than 80%. The L1 Japanese results were similar in that the L1 Japanese speakers overwhelmingly accepted the neutral perfective reading with 8 out of 16 verbs (*paint, eat, erase, untie*, *shred, melt* and *drew*; acceptance rate ≥ 80%). There were 6 verbs (*assemble, circle, build, remove, fill* and *empty*) which L1 Japanese consistently rejected with incomplete events (acceptance rate ≤ 20%). The remaining verbs (*type* and *unwrap*) showed an intermediate acceptance rate (40% and 60% respectively). Thus, contrary to a common view expressed in the literature, in this specific task, both English and Japanese show individual predicate variation in whether a past predicate may refer to an incomplete event. According to our results it would be an overstatement to claim that native speakers of Japanese always allow a neutral perfective reading with past accomplishments or that native speakers of English always exclude this reading. Whereas we feel responsible to point out this variation in our data, understanding its nature is beyond the scope of this paper (see Soh & Kuo, 2005 which discusses this issue).

In the L2 English group, for 8 out of 16 predicates (*eat, erase, untie, disassemble, type, paint, shred* and *assemble*) the L2 learners' acceptance rate

in condition B showed a clear shift from the original L1 Japanese level towards the target L1 English interpretation (this is also vacuously true for the verb *build*). In other words, for these predicates the L2 learners of English learnt to invalidate the neutral perfective reading that is present in their L1, although often they did not reach the target-like level yet. With verbs *circle*, *melt*, *draw* and *remove* the L2 scores were identical to the original L1 Japanese levels. Only in two cases (*fill* and *empty*) the acceptance rate of the neutral perfective reading was numerically higher in L2 English than in L1 Japanese. These data then suggest that the progression towards the target-like rejection of the neutral perfective reading is 'stable', i.e. it is not caused by a small subset of predicates.

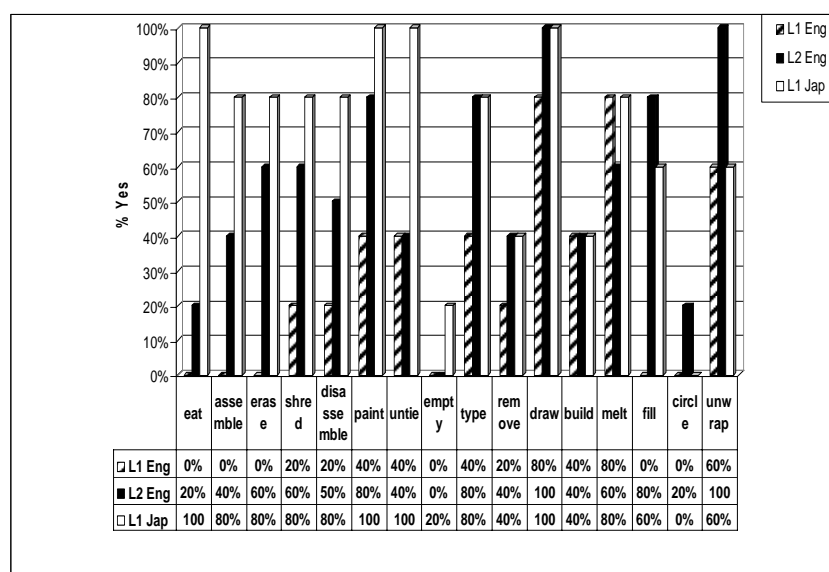|	eat	asse mble	eras e	shre d	disa sse mble	paint	untie	empt y	type	rem ove	draw	build	melt	fill	circl e	unw rap
▨ L1 Eng	0%	0%	0%	20%	20%	40%	40%	0%	40%	20%	80%	40%	80%	0%	0%	60%
■ L2 Eng	20%	40%	60%	60%	50%	80%	40%	0%	80%	40%	100	40%	60%	80%	20%	100
☐ L1 Jap	100	80%	80%	80%	80%	100	100	20%	80%	40%	100	40%	80%	60%	0%	60%

Figure 3. Breakdown of results of the truth-value judgment task by individual predicates: Condition D

The results from condition D are given in Figure 3 and show, overall, the same pattern as in condition B (with the difference that an average acceptance rate of the neutral perfective reading is higher in all three groups than in condition B). In particular, 8 out of 16 predicates (*eat, assemble, erase, shred, disassemble, paint, untie* and *empty*) yielded an acceptance rate in the L2 English that was in between the original L1 Japanese and the target L1 English levels (this is also technically true for the verb *build*). [Note a high overlap between predicates showing progression to the correct direction in Condition B and in Condition D]

5.3   Is there any overt correlation between the morphological task and the truth-value judgment task?: individual participant data

Section 5.2 provides an answer to our first question by showing that L2 learners of English do progress towards a correct representation of the semantics of the simple past during the course of L2 acquisition. In this section we present a comparison between the results from the morphological task and the truth-value judgment task in order to answer our second question: does the acquisition of semantics of telicity correlate with the acquisition of the relevant DP morphology? In exploring such correlation we will concentrate on Conditions B and D (as conditions A and C are similar in L1 Japanese and L1 English and thus reaching a target-like performance on these conditions does not require any changes from L2 speakers).

   The results of a two-tailed Pearson's test revealed no significant correlation in the performance of the L2 English group in the morphological task and their performance in the truth-value judgment task ($r(20)= -0.233$, $p>.1$). It may be worthwhile looking at the individual subject data to assess a range of proficiencies in the two tasks that are attestable within the same speaker. Recall that each participant was tested on four trails in each condition of the truth-value judgment task and on 12 (6 singular and 6 plural) trials in the morphological task. Thus in the TVJT a participant could either accept the target sentence in all trials (Yes/No score = 4/0), or consistently reject it (Yes/No score = 0/4), or accept it on some trials but not on others (Yes/No scores 1/3, 2/2 or 3/1) [represented by each row in Tables 2A and 2B]. Similarly, in either the singular or plural condition of the morphological task a participant could always provide a correct answer in every trial (Correct/Incorrect score 6/0) or always choose a wrong answer (Correct/Incorrect score = 0/6) or be somewhere in between (Correct/Incorrect scores 5/1, 4/2, 3/3, 2/4 or 1/5) [represented column-wise in Tables 2A and 2B]. Tables 2A and 2B summarize performance in the morphological task and in condition B and D of the truth-value judgment task by L2 English group. Each cell indicates how many Japanese learners of English had the corresponding Yes/No and Correct/Incorrect scores in the truth-value judgment task and the morphological task respectively.

A

MT(Sg) #Cor/Inc TVJT ConB: # Yes/No	0/6	1/5	2/4	3/3	4/2	5/1	6/0
0/4	1		1				[shaded]
1/3	1						4
2/2	1			1		1	3
3/1	1					1	3
4/0						1	1

B

MT(Pl) # Cor/Inc TVJT ConD:# Yes/No	0/6	1/5	2/4	3/3	4/2	5/1	6/0
0/4				1			1 [shaded]
1/3							2
2/2		1	1		1	2	3
3/1			1	1	1		2
4/0			1				2

Table 2. Performance of individual participants from the L2 English group. A shaded cell designates a target-like performance.

The tables above clearly demonstrate that the learner's success in acquiring the DP morphology is not a reliable indicator of his/her level of understanding the telicity properties of English predicates. For example, Table 2A suggests that there are learners who have an accurate knowledge of the DP morphology (Correct/Incorrect score = 6/0 or 5/1) and yet consistently fail to reject English simple past accomplishments with incomplete events (Yes/No score = 4/0) [the corresponding cells are surrounded by a thick border]. In the opposite direction, there are learners who always correctly rejected target sentences with incomplete events (Yes/No score = 4/0 or 3/1) and yet demonstrate a very poor knowledge of DP morphology (Correct/Incorrect score = 6/0) [corresponding cells are surrounded by a double-line border]. Similar observations hold for the plural condition in Table 2B. These results point to the conclusion that the learner's knowledge of the DP morphology does not straightforwardly translate into knowledge of the semantics of telicity.

6. Discussion

The goal of this study was to investigate the acquisition of morphology and the semantics of telicity by Japanese learners of English. Specifically, we tested whether adult learners can derive telicity of English accomplishment predicates as a function of their nominal argument and whether acquisition of morphology (determiners & plural –s) correlates with the acquisition of the semantics of telicity.

The results from a truth-value judgment task with 20 intermediate Japanese learners of English suggest that L2 learners can acquire telicity properties of English predicates even in the absence of any overt instruction. Overall, our L2 English data show a shift towards the target L1 English-like representation of telicity. This is further supported by analysis of individual predicates which reveal a shift in L2 speakers' judgments in English (compared to the native Japanese judgments) for more than half of the predicates, whereas shifts in the opposite direction are much rarer. Examination of the data from the morphological task and the truth-value judgment task indicates no direct relationship between the acquisition of overt morphology and the acquisition of the semantics of telicity. Failure to correctly use the DP morphology does not necessarily indicate the L2 speaker's complete failure to correctly calculate the predicate telicity and vice versa.

The observed morphology-semantics mismatch in Japanese learners of English is similar to the findings on English learners of Russian by Slabakova (2003, 2005). L2 Russian learners have shown difficulty in acquiring Russian aspect-marking morphology, whereas they correctly computed the semantics of aspectual distinctions. Importantly, telicity in Russian is often encoded through idiosyncratic verbal prefixes and learning these prefixes may be especially costly. Hence, Slabakova's findings can be explained by appealing to difficulties in memorizing an appropriate prefix. This explanation is not fully extendable to our data in that morphological markers of DP boundedness in English are more regular. Comparison of our data with the data from beginner and advanced Japanese learners of English (which are currently being collected) may provide additional insights into the nature of the morphology-semantics mismatch in L2.

References

Chierchia, Gennaro. (1998). Reference to kinds across languages. *Natural Language Semantics* 6:339-405.

Crain, Stephen. & Rosalind. Thornton. (1998). *Investigations in Universal Grammar: A Guide to Experiments in the Acquisition of Syntax and Semantics.* The MIT Press: Cambridge, MA.

Déprez, Viviane. (2005). Morphological number, semantic number and bare nouns. *Lingua*, 115, 857-883.

Gabriele, Alison. (to appear). Interpreting Bare Nominals in L2 Japanese. *Proceedings of the Generative Approaches to Language Acquisition North America 2 conference.*

Koenig, Jean.-Pierre. & Nattannart. Muansuwan. (2000). How to end without ever finishing: Thai semi- perfective markers. *Journal of Semantics*, *17*, 147-184.

Montrul, Silvina. and Roumyana. Slabakova. (2002). The L2 acquisition of morphosyntactic and semantic properties of the aspectual tenses preterite and imperfect. In A. T. Perez-Leroux & J. Liceras (eds.). *The Acquisition of Spanish Morphosyntax: The L1/L2 connection* (pp. 131-149). Netherlands: Kluwer Academic Publishers.

Singh, Mona. (1991). The perfective paradox: how to eat your cake and have it too. *BLS* 17: 469-478.

Singh, Mona. (1998). On the semantics of the perfective aspect. *Natural Language Semantics* 6: 171-199.

Slabakova, Roumyana.. (2003). Semantic and morphological reflexes of functional categories: the case of telicity marking in L2 Russian. In J. M. Liceras, H. Zobl & H. Goodluck. (eds.), *Proceedings of the 6th Generative Approaches to Second Language Acquisition Conference (GASLA 2002).* 284-297.

Slabakova, Roumyana. (2005). What is so difficult about telicity marking in L2 Russian? *Bilingualism: Language and Cognition* 8 (1) 63-77.

Smith, Carlota. (1991). *The Parameter of Aspect*. Dordrecht: Kluwer.

Soh, Hooi. Ling. & Kuo Yi-Chun (2005). Perfective Aspect and Accomplishment Situation in Mandarin Chinese. H.J. Verkuyl, H. de Swart & A. van. Hout (Eds.), *Perspectives on Aspect*, 199-216.

Tai, Jhy. (1984). Verbs and times in Chinese: Vendler's four categories. *CLS* 20: 289-296.

Tsujimura, Natsuko. (2003). Event cancellation and telicity. In W. McClure (ed.), *Japanese/KoreanLinguistic*s.12: 388-399.

Verkuyl, Henk. (1972). *On the Compositional Nature of the Aspect.* Dordrecht: Kluwer.

Verkuyl, Henk. (1989). Aspectual clauses and aspectual composition. *Linguistics and Philosophy* 12: 39-94.

Verkuyl, Henk. (1993). *A Theory of Aspectuality.* Cambridge: Cambridge University Press.