1. Introduction

In English matrix/root sentences, DPs with the definite or indefinite article are ambiguously specific or non-specific. The same applies to NP-Acc in Japanese followed by a bare numeral.

(1) a. We’re looking for a secretary.
    (His name is Robert, and he should have been here an hour ago).

b. We’re looking for a secretary. (Anyone who can create a webpage will do).

(2) a. John-hisho-o hitori motometeiru.               (specific/non-specific)
       John-nom secretary-Acc one wants
       ‘John wants a secretary’.

Unlike English and Japanese, Spanish has a particle a which in certain contexts can identify a specific reading. Specifically, in object position a [+animate] (or personified) N preceded by a definite article obligatorily takes the particle a, and is ambiguously specific or non-specific (example (3c)). A [+animate] (or personified) N preceded by an indefinite article may optionally take the particle a. When a is present the reading is specific (3a), when it is absent the reading is non-specific (3b) (Torrego, 1998; Zagona, 2002). [+animate] Ns in object position do not take the particle a, and are ambiguously specific or non-specific (3d).

(3) a. (Yo) busco a una secretaria. (specific)
       (pro) look prep. –def secretary
       ‘I’m looking for a secretary’

b. (Yo) busco una secretaria. (non-specific)
       (pro) look -def secretary
       ‘I’m looking for a secretary’

c. (Yo) busco a la secretaria. (specific/non-specific)
       ‘I’m looking for the secretary’

d. Pedro quiere una casa. (specific/non-specific)
       ‘Pedro wants a house’

However, a caveat needs to be added to this description. In restrictive relative clauses (RRCs), the mood of the verb in the relative clause determines the specificity of the head hence overriding the effect of a. If the verb is indicative (IND), the head N will have a specific reading (4a), if the verb is subjunctive (SUB) the head N will have a non-specific reading (Quer, 1998 and references therein for crosslinguistic evidence; Rivero, 1975, 1977). This poses a considerable learning problem for L2-ers since they will encounter a being used both with specific and non-specific interpretations when [+animate] Ns appear with both definite and indefinite articles. They will need to work out the effect

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of the interaction of animacy, definiteness and mood in determining the possibilities for the interpretation of specificity.

(4) a. La empresa contratará **a la secretaria que sabe inglés**.
    Det company hire-aDet Det secretary that know-IND English.
    ‘The company will hire the secretary that knows English. (Her name is Rosa.)’

b. La empresa contratará **a la secretaria que sepa inglés**.
    Det company hire-aDet Det secretary that know-SUB English.
    ‘The company will hire the secretary that knows English. (They hold the interviews tomorrow.)’

English lacks the link between mood and specificity in RRCs; the inherently ambiguous specific and non-specific readings of the indefinite/definite DPs are disambiguated pragmatically by context:

(5) a. We will hire **the secretary** who knows English.
    (Her name is Rosa, and she was the best of the people we interviewed).

b. If it is difficult to decide between candidates at the interview, we will hire **the secretary** who knows English.

Japanese behaves somewhat like Spanish and somewhat like English: it has a SUB complementiser, *yōna, yoo* (*-ni (to))*), that identifies the modified NP-Acc as non-specific, but if no subjunctive complementiser heads the embedded clause, the specific or non-specific interpretation of the modified NP-Acc has to be disambiguated by the context (Uchibori 2000, 2001; see Watanabe, 1996 for *koto* as another type of subjunctive complementiser):

(6) a. Watashi-tati-wa [eigo-ga dekiru **hisho-o**]hituyou-to si-teiru
    we-Top English-Nom can secretary-Acc need do copula
    ‘We need the secretary who knows English.’ (specific or non-specific)

b. Watashi-tati-wa [[eigo-o hanaseru **yōna**] **hisho-o**] yatoitai.
    We-Top [English-Acc can speak SUB secretary-Acc] hire want
    ‘We want to hire the secretary who speaks English’ (non-specific)

Collentine (1995) examined the oral production of L1 English instructed learners of Spanish, and Borgonovo and Prévost (2003) analyzed the interpretation L1 French speakers of L2 Spanish assign to sentences where mood contrasts are present. Both studies suggest that L2-ers at high intermediate and advanced levels still have difficulty in producing subjunctive morphology or assigning the correct interpretations to sentences where the IND/SUB contrast is involved; the IND mood is produced where the SUB mood is expected, or the SUB mood is selected in contexts where IND is the appropriate mood. Collentine (1995) suggested a relationship between the ‘syntactic complexity’ of the constructions that involve mood contrasts and the L2-ers difficulties in producing subjunctive morphology. However, more evidence is needed in order to establish whether native-like acquisition of these properties is a possibility. The present study seeks to contribute with data from speakers who have been exposed to Spanish mood contrasts for a considerable time; a specific aim is to find out whether long immersed L2 Spanish speakers show native-like knowledge/interpretations of the semantic effects driven by the mood distinctions in embedded RRCs, i.e. whether they correctly assign +specific readings to DPs modified by IND-RRCs and whether they correctly relate −specific readings to DPs modified by SUB-RRCs.

The paper is organized as follows. In Section 2, I briefly present the linguistic assumptions made about the underlying structure of the target sentences. In Section 3, I describe the study design. In Section 4, group and individual results are presented. Section 5 contains the discussion and conclusions.
2. Assumptions about the Structure and Interpretation of Spanish RRCs

The following assumptions are made in order to account for mood contrasts in Spanish RRCs and their semantic effects: the grammatical distinction between indicative/subjunctive is yielded by a morphosyntactic feature [mood] able to trigger movement of other items (Giorgi & Pianesi, 1997). T in subjunctive embedded clauses is defective in that it is not capable of assigning structural Nominative Case (Pesetsky & Torrego, 2004; Uchibori, 2000, 2001). Nom Case assignment is independent of completeness/defectiveness of phi-features (contra Chomsky, 2001). The numeration for computing both IND and SUB RRCs contains an uninterpretable [uTemporal] feature, but only SUB RRCs require the selection of [umood].

The T in IND-RRCs is characterized as [+tense] [± past] with complete phi-features; T-comp(lete) is capable of Nom Case assignment. By contrast, the T in SUB-RRCs is only specified for [± past], has complete phi-features, but is defective because it has the feature [-tense]; the overt phi-features of the verb encoding the subjunctive allow for coindexation with those of the pronominal subjunctive subject (Picallo, 1984). MP (Modal/Mood Phrase) located between CP and TP hosts mood features able to trigger V-movement (Rivero, 1994). Furthermore, the selection of the features [umood] and [uTemporal] from the feature inventory determine whether the NP/DP antecedent of the relative clause and the copies within it are interpreted as specific or non-specific, irrespective of the definiteness of the head N: selection of [umood] will project MP. Both [umood] and [uTemporal] are features of embedded V; V raising to M allows for checking of [umood] by the corresponding interpretable features. The Spec–M position is the site where the subjunctive pronominal subject (Op) has its Nom case licensed (Kempchinsky, 1998 and references therein). The [uTemporal] feature valued by M anchors the event in relation to a time in a possible world (irrealis). Coindexation of N with the chain of copies formed by Op, and simultaneous valuing of [uTemporal] of V by T-def and [umood] by M yields non-specific interpretations. By contrast, IND RRCs do not project MP. T-comp is capable of Nom case assignment; [uTemporal] under V when valued by T-comp anchors the event in relation to the moment of speech (realis). Coindexation of N with copies of Op and simultaneous valuing of [uTemporal] of V by Tcomp yields the specific interpretation of the head N.

Unlike Spanish, English has a very impoverished system of grammatical moods (Giorgi & Pianesi, 1997); since English lacks mood contrasts, the specificity interpretation of the head N is disambiguated by context. Japanese overtly marks the subjunctive mood by means of subjunctive complementisers. As in Spanish, lexical and tense factors seem to determine the appearance of the subjunctive complements: T is defective [-tense] but [+fin], thus Nom/Structural case of its subject cannot be valued by it. For this reason, the subject or N is moved from the complement subject position to the matrix position where Tcomp checks Nom case by raising out of CP. This instance of raising is argued to be properly subject to the Last Resort nature of movement. The tense interpretation of the raising subjunctive complement depends on the tense specification of the matrix clause. The lack of tense in the defective T does not allow for reference to an event that must be associated with a specific time point or duration in order to yield a proper eventive reading; in the presence of the subjunctive complementiser, the relativised subject is necessarily interpreted as non-specific (Uchibori, 2000, 2001).

Against this background, and assuming that in L2 acquisition UG is available at all stages (i.e. access to the feature inventory and the computations is available in ILGs) and that parametric differences are at the level of lexical-feature specification, with uninterpretable features (uF) the locus of variation while interpretable features (iF) are universal (Chomsky, 2001), the following predictions were formulated: there should be no differences between L1 speakers of Japanese and L1 speakers of English in the acquisition of L2 Spanish, even though Japanese has a link between mood and specificity while English does not; there should be no effects arising from the definiteness of the head of the relative clause on subjects’ performance; similarly, no effects should arise from the animacy in the head of the relative clause on subjects’ performance because the specificity interpretation does not depend on this semantic feature.
3. The Study

3.1 Participants

Long-immersed L2 speakers of Spanish with English (British, Canadian and North American) or Japanese L1, and a group of native speakers (NS) for control, took the Grammar Component of the University of Wisconsin Placement Test (UWPT)\(^1\) and achieved the scores in table 1. These represent ‘very advanced proficiency’ in Spanish.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Age</th>
<th>Age Mean</th>
<th>Immersion Years</th>
<th>Immersion Mean</th>
<th>Scores UWPT</th>
<th>Scores Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>15</td>
<td>20-48</td>
<td>33</td>
<td>3-18</td>
<td>6.4</td>
<td>729-850</td>
<td>789</td>
</tr>
<tr>
<td>Japanese</td>
<td>8</td>
<td>24-44</td>
<td>33</td>
<td>3-32</td>
<td>11</td>
<td>664-744</td>
<td>704</td>
</tr>
<tr>
<td>English</td>
<td>9</td>
<td>28-60</td>
<td>40</td>
<td></td>
<td></td>
<td>644-850</td>
<td>747</td>
</tr>
</tbody>
</table>

Table 1. Participants’ information

3.2 Materials

An interpretation task was devised\(^2\); it consisted of 24 story-like scenarios, each with an introductory context and two continuations (4 conditions/6 tokens each: 3 +ani, 3 -ani)\(^3\). The continuations involved a singular object DP modified by a RRC. The D was either the definite article (el, al\(^4\)/la, masc/fem) or an indefinite article (un/una, masc/fem). Both continuations differed minimally in the mood of the verb in the relative clause. Participants were asked to read the scenarios and tick the continuation they thought was the most appropriate one according to the content of the scenario. No time limit was set for the task, but it was completed in approximately 25 minutes. The following provides an example of an experimental item:

(7) Condition 4 [–spec –def] (Indef article; context-determined non-specific reading; (SUB) expected):

Sofía y José quieren aprender a bailar tango. Sin embargo, en la academia de baile de su colonia sólo enseñan samba, danzón y salsa\(^5\).

Sofía y José…

( ) #están buscando una academia que enseña tango.
are looking for an academy that teach-IND tango.

( ) están buscando una academia que enseñe tango.
are looking for an academy that teach-SUB tango.

‘They are looking for an academy that teaches tango’

Where the context biased a non-specific reading informants were expected to tick the continuation with the verb in the subjunctive. Conversely, where the context biased a specific reading informants

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\(^1\) The variety of Spanish spoken by both control and experimental groups was Latin American: Mexican. All subjects were tested in Mexico; most of them had had their first contact with Spanish during high school; from the original pool of participants, only those that fell into the very advanced level were kept for the analysis.

\(^2\) Although the design was similar to traditional Truth Value Judgement Tasks (TVJT), participants were not asked to judge whether the content of the continuations was True or False, thus the task may be better considered a Preference task (Bonnie Schwartz, p.c.).

\(^3\) Two items were eliminated because the control group rejected their intended reading above 70% of the times. Distractors were also included but not discussed here.

\(^4\) ‘al’ = ‘a +el’.

\(^5\) ‘Sofia and Jose want to learn how to dance tango. However, in the dancing academy nearby their colonia only samba, danzon and salsa is taught’.
were expected to tick the continuation with the verb in the indicative mood. All items were randomized and the continuations alternated. Correct answers were scored 1, incorrect ones 0.

3.3 Results
3.3.1 Group Results

<table>
<thead>
<tr>
<th>Context</th>
<th>Groups</th>
<th>Means (SD)</th>
<th>Means (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+spec+def]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND #SUB</td>
<td>NS (n=15)</td>
<td>.79 (.18)</td>
<td>.21 (.18)</td>
</tr>
<tr>
<td></td>
<td>Jap (n=8)</td>
<td>.57* (.27)</td>
<td>.43* (.27)</td>
</tr>
<tr>
<td></td>
<td>Eng (n=9)</td>
<td>.71 (.30)</td>
<td>.29 (.30)</td>
</tr>
<tr>
<td>[-spec +def]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#IND SUB</td>
<td>NS (n=15)</td>
<td>.11 (.12)</td>
<td>.89 (.12)</td>
</tr>
<tr>
<td></td>
<td>Jap (n=8)</td>
<td>.25 (.24)</td>
<td>.75 (.24)</td>
</tr>
<tr>
<td></td>
<td>Eng (n=9)</td>
<td>.24 (.15)</td>
<td>.76 (.15)</td>
</tr>
<tr>
<td>[+spec -def]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND #SUB</td>
<td>NS (n=15)</td>
<td>.88 (.13)</td>
<td>.12 (.13)</td>
</tr>
<tr>
<td></td>
<td>Jap (n=8)</td>
<td>.70 (.21)</td>
<td>.30 (.21)</td>
</tr>
<tr>
<td></td>
<td>Eng (n=9)</td>
<td>.67* (.30)</td>
<td>.33* (.30)</td>
</tr>
<tr>
<td>[-spec -def]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUB #IND</td>
<td>NS (n=15)</td>
<td>.09 (.15)</td>
<td>.91 (.15)</td>
</tr>
<tr>
<td></td>
<td>Jap (n=8)</td>
<td>.12 (.19)</td>
<td>.88 (.19)</td>
</tr>
<tr>
<td></td>
<td>Eng (n=9)</td>
<td>.28* (.26)</td>
<td>.72* (.26)</td>
</tr>
</tbody>
</table>

Table 2. Overall Group Means

Between groups comparisons (one-way ANOVA), and estimations of the magnitude of the effect size (d)\(^6\) revealed that the Japanese group differed from NSs in not linking IND with [+spec +def] contexts, preference for selecting #SUB (F=2.016, df (2, 29), p= .151; GLM Univariate, and (d), p=.054, d=.977, and p=.463, d=.333 for the Japanese and English groups, respectively (Fig.1)). Similarly, in the [-spec+def] context the Japanese group tended to interpret as +spec #IND these contexts, however no statistical difference from NS was observed (F= 2.717, df (2, 29), p=.083; GLM: p=.022, d=1 and p=.059, d= 1.05, respectively (Fig.2)). By contrast, the English group interpreted as non-specific (#SUB) the [+spec-def] contexts differing from NS, while Japanese only approached significance (F= 3.625, df (2, 29), p=.039; GLM and (d): p=.022, d=1 and p=.059, d= 1.05, respectively (Fig.3)). Finally, the last comparison on the [-spec-def] context showed that English speakers but not Japanese differed from NSs in linking the subjunctive mood with the non-specific interpretation of these contexts, allowing #IND or specific

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\(^6\) Due to the small number of participants in the experimental groups, the effect size was calculated in order to prevent error type II, i.e. failing to reject the null hypothesis when in fact it is false because of sampling errors.
readings in this context type F=2.632, df (2, 29), p=.089; GLM and (d): p= .032, d=.95 and p=.681, d=.17 for the English and Japanese groups, respectively (Fig.4)).

Further planned comparisons were performed in order to find out whether participants within each group were making the distinctions between the appropriate and inappropriate specificity readings for each type of scenario. These confirmed that NS correctly assign the intended interpretation in each context type; however, Japanese speakers did not distinguish between +spec (IND) and –spec (SUB) readings of +def DP, (t=.782, df=7, p=.230); by contrast, the English group tended to assign -spec #(SUB) readings to +spec (IND) indefinite DPs (t= 1.667, df= 8, p=.067).

Interestingly, the comparisons that were intended to find out whether participants were treating the animacy of DPs independently from specificity and definiteness showed that animacy on the nouns was distinguished by English speakers only on non-specific indefinite DPs (SUB), (t=1.890,df=8, p.047). On the other hand, Japanese speakers treated animacy differently with +specific definite DPs (IND), (t=-3.05, df=7, p=.009). Spanish speakers also made distinctions in the animacy of non-specific definite DPs (IND), (t=3.05, df=14, p=.004) and non-specific indefinite DPs (SUB), (t=-2.26, df=14, p=.020).

Finally, the possibility was entertained that participants’ responses might have been influenced by taking the particle a as an indicator of specific DPs (a sort of metalinguistic rule). If this were in fact the case, we expected all non-specific ±definite ±animate contexts to be interpreted as specific and all ±spec ±definite but inanimate contexts to be assigned the contrary specificity interpretation. In other words, only the +spec ±definite but +animate contexts should be correctly interpreted. Visual inspection of the obtained means did not support this scenario.

3.3.2. Individual Results

Although means are representative measures of the tendency/performance of a group, individual differences may have been concealed by group results. When looking at the individual responses within each group, it was found that their selections in each of the type of contexts pattern with the results obtained by group. In other words, in the contexts that proved less problematic, more participants fell within the NS range, i.e. less variation within participants’ responses was observed; by contrast, in the problematic contexts, more participants showed a varied behavior, i.e. fewer participants fell within the NS’s range. For instance, 75% of Japanese subjects fell within the NS range in the [-spec-def] context, however, the lowest accuracy percent observed was 50%. On the other hand, only 56% of English speakers patterned in the NS range in this same context type, while the lowest accuracy percent observed was 17%. Nevertheless, within each experimental group and within the problematic contexts there were participants that did not differ at all from NSs in the linking of the specificity interpretation with the corresponding mood of the verb in the embedded RRC. Lack of space prevents me from showing detailed results.

An accuracy percentage of at least 80% was taken as a basis for native-like performance (equivalent to missing 1/total of tokens in each context type).
4. Discussion and Conclusions

Summarizing the results, in spite of long immersion, the Japanese speakers seem not to be aware of the link between the specific interpretations and the IND mood in definite contexts (this was observed in both between and within group comparisons: both target IND and #/SUB were selected at around the same rate). By contrast, the English group showed non-native interpretations in their linking of #IND with non-specific interpretations (i.e. SUB) when the N was indefinite (in the within groups comparison, English speakers differentiated between the target and non-target interpretations, though). The Japanese seem to know that non-specific readings of indefinite DPs correspond with the subjunctive mood, while English speakers seem to know that specific and non-specific definite DPs correlate with IND and SUB mood, respectively.

Recall that in the presence of the subjunctive complementiser in raising complements in Japanese, the relativized NP is necessarily interpreted as non-specific; thus, the effects of L1 transfer in the Japanese group may have influenced the correct linking of non-specific indefinite DPs with SUB-RRCs. By contrast, contexts like +spec +def, modified by an IND-RRC proved problematic. This behaviour contrasted with the success of English speakers in the same context type. The presence of D in English may have positively influenced the participants’ correct interpretations; the problematic contexts, however, were those that required the linking between a non-specific interpretation and the SUB mood. While L1 transfer seemed to play a role in establishing the correct interpretations, where cross-linguistic differences exist, the groups’ performance was less target-like.

Similar to the findings of previous studies briefly reported in Section 1, L2 Spanish speakers still show non-native like performance on the properties absent in their L1: for Japanese participants, absence of D prevents the assignment of correct interpretations; for English speakers, absence of SUB is related to the observed difficulties. Japanese speakers allowed for non-specific interpretations in contexts where the +spec-indicative selection/interpretation was expected; English speakers showed a bias towards subjunctive in contexts where the target selection/interpretation was the +spec-indicative, too (e.g. incorrectly linking #SUB with +spec-def contexts in the within group comparison analysis). In a view of SLA where LF uninterpretable features not selected during the course of L1 acquisition are no longer available for post-critical period L2 acquisition (cf. Hawkins and Chan, 1997; Tsimpli, 2003a), the observed problems in the English group may have its source in the non availability of [mood] in the L1 and consequently in their ILGs. L2-ers whose interpretations mirrored the NSs interpretations may have resorted to the use of a compensation strategy to avoid unconstrained representations, i.e. misanalysis. The misanalysis strategy involves a morphological ‘re-analysis’ mechanism of the uninterpretable features in the target language by the assignment of available semantic features that regulate the distribution of these items to avoid unconstrained optionality in their use by the adult L2 speaker, and to fulfill legibility conditions at the interfaces (Tsimpli, 2003b).

Along the previous lines, L2-ers assign the values of available interpretable features to the parameterized uninterpretable ones. Suppose Japanese speakers have the [mood] activated in their grammar, so no recourse to a misanalysis of subjunctive is necessary; however, as the reader may recall, the L1 Japanese participants made a stronger distinction than English speakers, reflected in their scores in the contexts that were problematic for them: English speakers in [-spec-def] differed from NSs in allowing for #IND interpretations, but the performance was better in [-spec-def+ani] tokens than in [-spec-def-ani] ones. By contrast, Japanese speakers in the [+spec± def] contexts allowed for #SUB interpretations, and unlike English speakers their performance was better in [+spec±def-ani] tokens than in [-spec±def+ani] ones. In the absence of D in Japanese, the [animacy] feature of N may have been used in order to regulate the distribution of L2 articles, and allow for the appropriate coindexation of the Op (and the chain of copies formed along the derivation) with N and D. By contrast English speakers may have misanalyzed the [animacy] of N to allow for the appropriate coindexation of Op with N and D. This misanalysis is reflected in the relative success of linking [-spec-def] with SUB (higher scores obtained with [+ani] nouns), and at the same time, in the [+spec-def] the overuse of #SUB with [+ani] nouns suggests that subjunctive RRCs are nevertheless problematic for English speakers.

Contrary to predictions, the results suggested that in spite of long immersion and overt evidence of mood contrasts in the input, neither experimental group converged fully with the native speaker interpretations in the contexts where crosslinguistic differences exist. Nevertheless, success in linking IND/SUB mood in RRCs with the appropriate specific/non-specific interpretations may result from 1)
the effect of positive L1 transfer: uFs of the target lexical items in the L2 that are already selected in the L1 will lead to native–like representations/interpretations, 2) in the absence of the corresponding uF in the L1, the implementation of a ‘misanalysis’ strategy to avoid unconstrained variability may lead to native–like representations/interpretations. However, variation within the experimental groups require a closer look at individual performance, further correlations between age of first exposure, length of residence and performance in the test are also needed before drawing stronger conclusions or claims as to which the final attainment of these properties is. Finally, the design of the test is not exempt of weaknesses: a third ‘I don’t know’ option should have been allowed in order to reduce guessing effects, and the provision of the scenarios in their L1 might have reduced the possibility that their answers were biased by the lack of comprehension of their content. Further research extended to other constructions where mood contrasts surface is needed.

References


