The Unlearning of Null-Arguments by Thai Learners of English

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Abstract

This study investigated Thai learners’ abilities to detect the ungrammaticality of English sentences with null arguments (i.e. null subjects and null objects). Based on previous L2 research findings and L1 facts, we predicted that (1) Thai learners of English would be able to judge the sentences with null subjects more accurately than those with null objects and (2) the null arguments in single clauses would be judged more accurately than those in embedded clauses. A Grammaticality Judgment task (GJ) was used to elicit 100 Thai students’ knowledge of English non-null arguments. Results (from Repeated Measures ANOVAs) confirmed both hypotheses, supporting earlier arguments for input consistency and discourse information in the unlearning of null-arguments.

Keywords: Null Arguments, Null Subjects, Null Objects, Thai Learners of English

1. Introduction

1.1. UG and the Pro-drop Parameter

One question that has been central to SLA research is how L2 learners acquire grammatical structures of the L2. This question is largely addressed in relation to Universal Grammar (UG). Specifically put, is the development of an L2 grammatical system guided by UG?

UG consists of a given number of invariant principles that all languages share and parametric options that different languages select in association with the set principles. In SLA research, to determine the availability of UG, one usually selects a UG parameter that is operative in the L2 but is not activated in the L1 and constructs tasks and test sentences that are consistent with the given parameter.

One of the commonly studied UG parameters is the pro-drop parameter (initially proposed in Chomsky (1981)). Pro-drop refers to a phenomenon in which an argument, particularly the pronominal subject of a verb in a language (such as Italian) can be absent and its referent can be identified by the inflectional morpheme, which hosts person, number, and tense features. In L1 acquisition, using English speaking children’s production of auxiliary related instances, research suggests two different directions: the pro-drop parameter as the initial setting (Hyams (1986), (1989)) and processing restrictions (Valian (1991)). Aside from different suggestions, research has used the presence and absence of subjects and auxiliaries as evidence for the presence of the non pro-drop and pro-drop parameters.

With respect to SLA, a wider notion, i.e. null-arguments, is used, as the investigation is not restricted to inflectional languages such as Italian and English, but extended to Asian languages, some of which -- such as Chinese -- do not utilize inflectional morphemes. In addition, in such languages, both subject and object arguments can be omitted. In this respect, the literature in SLA has addressed the wider issue of null arguments, including those without inflectional morphology. Within this body of research, findings (e.g. those by Yuan (1997), Wakabayashi and Negishi (2003), and Kim (2007)) suggest L2 learners’ preference of null
objects to null subjects. This phenomenon, also known as the ‘subject/object asymmetry’ in language acquisition, is precisely the issue we address in the present study.

1.2. Significance of the Present Study

This study primarily investigates the specific issue of subject/object asymmetry (i.e. whether or not null objects are more accepted than null subjects) among Thai learners of English. We select Thai as the L1 and English as the L2. Thai, the participants’ L1, is a null-argument language, unlike L2 English, a non null-argument counterpart (see section 3 for the relevant information about Thai). Subjects were tested on items featuring either null subjects or null objects. With this particular design, we were able to check learners’ preferences. Since there has been little research done in this area with Thai subjects, this study aims to contribute to the existing knowledge of null arguments in the L2 literature.

1.3. Organization of the Paper

The remaining part of this paper is organized as follows. In section 2, we present research in SLA, a background about Thai, and two hypotheses. Section 3 shows the methodology consisting of subjects, tasks, and scoring. Section 4 reports results, in accordance with the hypotheses. Section 5 summarizes the findings and ties them in with the earlier studies.

2. Research Background

This section focuses on previous L2 research conducted with Asian learners whose L1s allow null arguments. We narrow the scope of the literature review here so that this section can serve precisely as a basis for our hypotheses on Thai learners’ development of the learning of non-null arguments of English. In line with this, we present a brief review of the literature featuring L2 learners’ preference of null objects (2.1) and null arguments in embedded clauses (2.2), and describe Thai facts in relation to the presence of null arguments in Thai (2.3). Two hypotheses conclude this section in 2.4.

2.1. Null Objects Preference

Yuan (1997) and Kong (2007) conducted studies on the unlearning of null arguments with Chinese learners of English as an L2 and found that the learners rejected sentences with null objects at a lesser rate than sentences with null subjects. Wakabayashi and Negishi (2003) conducted a similar study on Japanese learners of English as L2. Their results supported the findings (especially those of Yuan (1997)) where null objects were accepted more than null subjects. Kim (2007) replicated Yuan’s (1997) study. She tested if Korean learners would perform similarly to Chinese learners; her findings confirmed the preference of object omissions to subject omissions.

As to what really accounts for L2 learners’ realization of overt subjects, Yuan (1997) attributes this realization to subject-verb agreement, i.e. the presence/absence of subject-verb agreement results in overt/ non-overt subjects. Unlike Yuan, Wakabayashi and Negishi (2003) attribute it to consistency of input, i.e. sentential subjects are constantly supplied in the input; objects are not. This question, while remaining unsettled, has been addressed in research on null arguments in embedded clauses as well.
With Thai learners, Juntarote and Singhapreecha (2011) conducted research recently on the acquisition of English complements vs. adjuncts. Although it is not a study comparing between null subjects and null objects, findings are noteworthy as complements, i.e. objects, are relevant to this study. Using the presence and absence of complements in English declaratives and interrogatives in the GJ task, Juntarote and Singhapreecha found that their Thai high school student subjects, especially the lower intermediate group, allow null objects. As the overall subjects are relatively able to detect the ungrammaticality of object omissions, their findings suggest gradual development in the recognition of overt objects.

2.2. Null Arguments in Embedded Clauses

Kong (2001), in a continuing study on null-arguments from his (1998) study, notices that Chinese learners have difficulty in detecting the ungrammaticality of null subject sentences in embedded clauses compared to their matrix clause counterparts. Kong (2001) questions Yuan’s (1997) assumption that subject-verb agreement is a triggering factor for L2 learners’ realization of overt subjects. Kong found that Chinese learners in his 2001 study accepted null-subject embedded clauses at a greater rate than their single clause counterparts. He, then, remarks that subject-verb agreement may not account for the presence/absence of arguments and suggests that Chinese learners apply a discourse parameter when they encounter English embedded clauses. Kong also conducted follow-up pilot studies in 2005 and 2007 and found the same results.

2.3. Thai (L1)

Thai is a pro-drop language which allows omissions of subjects and objects in sentences (Kobsiriphat (1988), Hoonchamlong (1991)). Unlike English, where arguments are overt, in Thai arguments can be null, particularly when the referents can be obtained from the discourse context.

Null arguments in Thai can appear in both single and embedded clauses. This difference between L1 (Thai) and L2 (English) makes it worthwhile investigating whether Thai learners can recognize English sentences with the omissions of subjects and objects or not. It is noteworthy that these omitted arguments are typically pronouns and not lexical NPs as they are referents of the previously mentioned lexical NPs in the relevant contexts. In a question such as (1) below, two single-clause answers, i.e. (2a) and (2b) are possible. In (2a) the subject pronoun is expressed while the NP object is not. In (2b), both the subject and the object are omitted.

(1) khunʔāan nāŋsûu lêm nân rûuu yaŋ
   you read book Cl dem or not yet
   “Have you read that book?”
Sentence (3) is a question which can be answered by (4a) or (4b). Both (4a) and (4b) contain an embedded clause, where the object is obligatorily omitted in (4a), and both the subject and object are omitted in (4b).

(3) khun cà pay súuu ɾɔɔŋθáw múarày
you will go buy shoes when
“When will you buy shoes?”

(4) a. phǒm khít wàa phǒm cà pay súuu ɾhrûŋníi
1st (msc) think Comp 1st (msc) will go buy tomorrow
b. (phǒm) khít wàa e cà pay súuu ɾhrûŋníi
1st (msc) think Comp will go buy tomorrow
“I think that I will buy them tomorrow.” (for both (4a) and (4b))

Given the context in (1) and (3), it is clear that the omitted subject is pronominal. However, the status of the omitted object in (4) remains unclear as neither the lexical NP ɾɔɔŋθáw nor the overt pronominal counterpart man can be overt.2 Putting this issue aside, the fact suggests that Thai allows null arguments in both positions.

In light of the research findings, and the L1 fact discussed in this section, we have a firm basis to investigate Thai learners’ knowledge of the overt presence of arguments in English. In connection with this, if Thai learners allow null arguments in their L2 English, what patterns do they follow? Are they more sensitive to null subjects than null objects? In their acceptance of null arguments, is there a difference between single and embedded clauses? We formulate our hypotheses addressing these questions in the next section.

2.4. Research Hypotheses

Hypothesis 1: Based on L2 research findings and L1 facts discussed above, we hypothesized that Thai learners of English would allow null arguments in English sentences. Specifically, sentences with null objects would be accepted at a greater rate than those with null subjects.

Hypothesis 2: Based on L2 research findings, especially those of Kong’s (2001), we hypothesized that Thai learners of English would accept null arguments (i.e. subjects and objects) in embedded clauses at a greater rate than they would accept null arguments in single clauses.

1 Abbreviation in the glossary
1st (msc): masculine first person pronoun; Cl: Classifier
2 Identifying the type of this empty category requires an intensive theoretical investigation, beyond the scope of this research.
3. Methodology

3.1. Subjects

One hundred students from two institutions participated in this study. Sixty-nine subjects were attending a teachers’ college in Nakorn Pathom. Within this group, thirty-two were non-English majors and thirty-seven were English majors. The non-English majors enrolled in an English course only once a semester. The English-majoring student subjects studied English for business purposes as a core curriculum. The remaining thirty-one subjects were 11th graders, attending an all-boy missionary high school in Bangkok. The English proficiency of most of these 11th graders was higher than that of the students from the teachers college, due largely to their early, consistent, and intensive exposure to English, required by their school curricula.

3.2. Tasks

3.2.1. English Placement Test

The Michigan Test (consisting of 20 listening and 30 grammar items) established four proficiency levels. We adopted the following cut-off ranges. Those who scored from 9-18 were categorized as level 1 (beginning); from 19-29 as level 2 (low intermediate); from 30-39 as level 3 (intermediate); from 40-48 as level 4 (high intermediate). With these criteria, forty-five subjects were grouped in level 1, twenty-five in level 2, fifteen in level 3, and another fifteen in level 4.

3.2.2. Grammaticality Judgment (GJ) Task

We employed a Grammaticality Judgment (GJ) task to elicit learners’ knowledge of English non-null arguments. In addition, as expletive subjects are diagnostics to L2 learners’ realization of the grammatical subjects, we included a set of expletive subject sentences in the test items.

There were, in total, 58 items in the GJ task. They consisted of 12 sentences with null subjects in single and embedded clauses, 12 null objects in single and embedded clauses, 6 null subject expletive sentences, 18 grammatical counterparts, and 10 fillers.

In the null subject and object sentences, contexts were given with the omissions of subject and object pronouns in single and embedded clauses. The null subject and object tokens were constructed around three verbs: use, fix and get. Sentences (5) and (6) below display the omissions of the pronouns he and it in single clauses, (7) and (8) the omissions of she and it in embedded clauses, and (9) and (10) the grammatical counterparts.

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3 We determined the cut-off ranges on the basis of the average score, standard deviation, frequencies, and number of ranges. We found that the four ranges were largely consistent with subjects’ judgment accuracies. For example, results from the subjects’ judgments on null subject and object sentences indicated that there was a significant mean difference between level 1 and level 3, level 1 and level 4, level 2 and level 3, and level 2 and level 4, although a difference was not found between level 1 and level 2.

4 The test items were randomized and two different batteries were used.
<table>
<thead>
<tr>
<th>Examples of Test Sentences</th>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5) My son received a calculator from me. * used it every day last year.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) Kim received an English grammar book from his aunt. He used * every day last year.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Jane’s camera broke. She said that * had used it only once.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8) Jimmy’s Ipod stopped working. He said that he had used * only once.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9) Last year, Toon received a dictionary from his French teacher; he used it a lot at home.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(10) My friend’s laptop broke down. He said that he had used it only once.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These test sentences were presented with two choices: correct and incorrect. When the subjects judged a sentence as incorrect, they were asked to make a correction in the sentence. See the scoring section (3.4) below for more information.

3.3. Order of Task Presentation

We conducted the GJ task and the Michigan Test, in respective order. The subjects were given approximately 30 minutes to finish the GJ test sentences. They were presented 5-6 sentences at a time on a piece of paper and were asked to make their judgment based on a first-come-to-mind basis, without returning to revise the items they had judged. After a 10-minute break, they took the Michigan test, which lasted approximately another 30 minutes. Both tasks were administered on the same day. It took two days with the college student subjects: one day for the non-English majors; the other day for the English majors. At the high school, the two tasks were conducted on the same day, with the same ordering of tasks.

3.4. Scoring

A score was given for each correct judgment. When a subject indicated that sentence (10), repeated below, was correct, he/she was granted a point. When a subject indicated that sentence (5) was incorrect and added he in the sentential subject slot, he/she was granted one point. A subject who indicated that (5) was correct was given a zero score, as was a subject who indicated that it was incorrect but did not make any correction.

(5) My son received a calculator from me. * used it every day last year.

(10) My friend’s laptop broke down. He said that he had used it only once.

4. Results

Repeated Measures ANOVAs were performed, comparing two different aspects of the subjects’ judgments, in accordance with hypotheses 1 and 2. On one aspect, single and embedded null subject sentences were compared with their null object counterparts. On the other aspect, two comparisons were made: one between single clause null subjects and their
embedded clause counterparts, and another between single clause null objects and their embedded clause counterparts.

4.1. Null Subjects vs. Null Objects

Recall that hypothesis 1 states that null subject sentences would be judged more accurately than null object sentences. Across the four proficiency levels, the subjects detected the ungrammaticality of the null subject sentences more accurately than they did the null object sentences ($F (1,96) = 94.183$, $p < .001$), confirming the first hypothesis.

Table 1 below presents mean correct percentages of the subjects’ relevant judgments.

Table 1: Mean Correct Percentages on Null Subj, Obj, Expl, and Grammatical Sentences

<table>
<thead>
<tr>
<th>Structure/Prof Level</th>
<th>Null-Subj</th>
<th>Null-Obj</th>
<th>Null-Expl</th>
<th>Gram-Subj-Obj</th>
<th>Gram-Expl</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (N=45)</td>
<td>1.11(5.21)</td>
<td>0.37(1.73)</td>
<td>2.59(10.63)</td>
<td>70.00(20.55)</td>
<td>63.33(29.21)</td>
</tr>
<tr>
<td>2 (N=25)</td>
<td>14.33(24.48)</td>
<td>3.67(8.01)</td>
<td>10.67(21.98)</td>
<td>73.67(15.34)</td>
<td>64.00(22.40)</td>
</tr>
<tr>
<td>3 (N=15)</td>
<td>56.11(24.49)</td>
<td>25.00(26.91)</td>
<td>48.89(37.52)</td>
<td>77.22(11.12)</td>
<td>83.33(14.08)</td>
</tr>
<tr>
<td>4 (N=15)</td>
<td>76.67(24.64)</td>
<td>52.22(22.60)</td>
<td>78.89(29.19)</td>
<td>77.78(18.55)</td>
<td>87.78(14.73)</td>
</tr>
</tbody>
</table>

Note: The numbers in the parentheses represent standard deviations.

Given the results from Table 1 (illustrated as a bar graph in Figure 1 below), subjects at levels 1 and 2 performed minimally on null-subject and null-object structures, while those at levels 3 and 4 made a substantial improvement, with a striking increase between levels 2 and 3 on the null-subjects. Between levels 3 and 4, percent results suggest a remarkable, increasing accuracy in the null-subject judgment (56% and 77%) and a lower, still increasing accuracy in the null-object judgment (25% and 52%).
Although the judgments of level 1 and 2 subjects were considerably poor on null subjects and objects, their judgments on the grammatical counterparts were fairly accurate, similar to those of the upper levels. This pattern was confirmed statistically. Results from one-way ANOVAs revealed no significant differences in the judgments of grammatical sentences among the four groups.

In addition, the null-expletive subject pattern was largely consistent with that of the null-subject. Results from Repeated Measure ANOVAs indicated no significant differences between mean correct percentages of the null-expletive and the null-subject sentences. In respect of the grammatical expletives, percent results showed a slightly different pattern, compared to the pattern of the grammatical null subjects/objects. There was a considerable increase in accuracy between the two lower levels and the upper levels. One-way ANOVAs revealed a small, still significant, difference between proficiency levels ($F(3, 96) = 5.951, p < .05$).

Largely, the percent results here suggest greater sensitivity to null arguments and expletives with higher proficiency.
4.2. Single Clause Null Arguments vs. Embedded Clause Null Arguments

Hypothesis 2 states that null arguments in single clauses would be judged more accurately than null arguments in embedded clauses. Across the four proficiency levels, the student subjects detected the null subjects in single clauses more accurately than they did the null subjects in embedded clauses ($F(1, 96) = 13.985, p < .001$). Similarly, the null objects in single clauses were judged more accurately than the null objects in embedded clauses ($F(1, 96) = 8.541, p < .05$). Thus, the results from both the null subject and null object structures confirmed the second hypothesis. Table 2 below presents mean correct percentages of the subjects’ relevant judgments.

Table 2: Mean Correct Percentages on Null Subjects/Objects in Single and Embedded Clauses

<table>
<thead>
<tr>
<th>Structure/Prof Level</th>
<th>Null-Subject</th>
<th></th>
<th>Null-Object</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Clause</td>
<td>Embedded</td>
<td>Single Clause</td>
<td>Embedded</td>
</tr>
<tr>
<td>1 (N=45)</td>
<td>1.11 (5.50)</td>
<td>1.11 (5.50)</td>
<td>0.37 (2.49)</td>
<td>0.37 (2.49)</td>
</tr>
<tr>
<td>2 (N=25)</td>
<td>21.33 (31.37)</td>
<td>7.33 (21.56)</td>
<td>4.00 (11.06)</td>
<td>3.33 (6.81)</td>
</tr>
<tr>
<td>3 (N=15)</td>
<td>57.78 (34.43)</td>
<td>54.44 (26.33)</td>
<td>30.00 (31.62)</td>
<td>20.00 (26.13)</td>
</tr>
<tr>
<td>4 (N=15)</td>
<td>84.44 (27.79)</td>
<td>66.89 (25.87)</td>
<td>55.56 (24.12)</td>
<td>48.89 (27.07)</td>
</tr>
</tbody>
</table>

Given the results from Table 2, (illustrated as a bar graph in Figure 2 below), on the null-subject side, the data suggested minimal performance at levels 1 and 2. At level 3, the single and embedded structures were relatively close (58% and 54%). After level 3, the judgment of the single clauses rose markedly (84%) while the judgment of the embedded clauses improved steadily (67%).
On the null-object side, a similar pattern was found, but with a much lower accuracy across the four proficiency levels. Particularly, the high intermediate learners were able to judge both the single and embedded structures correctly only about fifty percent of the time (56% and 49%).

Post-hoc tests comparing mean percentages revealed significant differences between levels of proficiency on the null subject structures. Similarly, significant differences were found in the null object counterparts, with an exception (i.e. no difference) between levels 1 and 2. The role of proficiency in the recognition of null arguments is again confirmed.

5. Conclusion and Discussion

As shown in section 4, the results confirmed both hypotheses. Across proficiency groups, the learners accepted the English null objects more frequently than they did the null subjects. They also accepted the embedded clause null arguments more often than they did the single clause null arguments. Their acceptance of null arguments might be attributed to their L1, Thai, where subject and object omissions are widely common.

In response to the question of what accounts for the subject/object asymmetry posed earlier, as our null subject/object test sentences were contextualized in simple past tense (with a
slight clue to person/number agreement), we conclude that our results lend support to input consistency (cf. Wakabayashi and Negishi (2003)).

The above results, in favor of input consistency (and not subject-verb agreement), correspond with the comparisons between the single clause and embedded clause null subjects. If null subjects were related to the absence of subject-verb agreement, learners would omit them in single and embedded clauses at relatively the same rate. Our findings, however, indicate that null subjects in embedded clauses are more acceptable than those in single clauses, supporting Kong’s (2001) discourse information account. As is evident, the learners relied on identification which was available via the overt subject in a matrix clause, when they accepted the null subject in the embedded clause.

Apart from the confirmation of the hypotheses, some other findings are noteworthy. We found that the grammatical counterparts of the null arguments were already being judged fairly accurately at the lowest proficiency level and remained stable, indicating an option between null and overt arguments at the early stage of L2 acquisition. In addition, as the null expletive sentences were not significantly different from the single clause null-subjects, in L2 acquisition expletives may not be the predecessor of overt subjects. Finally, since sensitivity to null/non-null arguments increases with higher proficiency, we recommend that an intervention study be conducted in a way that the pre-test and the post-test are intervened by explicit teaching on overt arguments. Such a study can ascertain if consistent, intensive input, which the high intermediate group in this study had been exposed to, can enhance accuracy, an outcome desirable for both SLA and EFL.

6. References


