

The Availability of Universal Grammar to Second Language Learners; a Case of Overt Pronoun Constraint

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¹Abstract. This article reports on an experimental study that investigates the accessibility of UG to adult L2 learners of Persian. It focuses on the acquisition of the Overt Pronoun Constraint (OPC), a UG principle that prevents overt pronouns from having quantified NPs as antecedents in null-subject languages such as Persian. A group of 8 native English speakers living in Iran for several months were asked to interpret the null and overt pronominals in Persian equivalents of patterns such as *Whoi said that hei had a computer*. An acceptability judgment task was employed to indicate the participants' knowledge of the distinction between null and overt pronominals with reference to a co-indexed quantified antecedent. 20 Persian native speakers served as participants for the control group. Regarding the interpretation of null and overt pronominals with reference to binding by a quantified antecedent, L2 learners displayed statistically significant difference, as predicted by the UG principle while their performance was not significantly different from that of the native speakers.

Key words: Universal Grammar (UG), the Overt Pronoun Constraint, Second/Foreign Language Acquisition.

1. Introduction

In first language (L1) acquisition research, Universal Grammar (UG) is assumed as an account of how it is that language learners know properties of grammar that go far beyond the input they receive; in other words, there is a mismatch between the primary linguistic data (PLD) (i.e., the utterances to which a child is exposed), and the abstract, subtle, and complex knowledge of language that the child acquires. In other words, the input (PLD) underdetermines the output (the grammar). This is known as the 'poverty of the stimulus'.

Assuming the poverty of stimulus for L1 acquisition, thus motivating UG, some scholars have wondered whether the same proposal can be applied to second language acquisition (SLA) (Bley-Vroman, 1989; Schwartz and Sprouse, 2000). The natural extension of such arguments is briefly formulated by Felix (1988):

- "given that the process of L1 acquisition is heavily guided and controlled by a task-specific cognitive module called the language faculty (or UG), is it the case that also L2 learners use the same module to acquire the formal properties of the language they are exposed to, or do L2 learners use a different module (or several different modules) to accomplish essentially the same task?"(p.287)

To show the presence of UG in L2 developmental grammars is to present evidence showing that universal principles of UG are operating in the target language. White (2003) states that "the assumption is that if you can show that a particular UG principle operates/does not operate then this generalizes to other principles, hence to UG availability/non-availability in general" (cited in Doughty and Long, 2003: 23). Linguists have focused primarily on the deep-structure properties of language which, in the first place, characterize primary language acquisition: Structure-dependence, Wh-movement, Case filter, Subjacency etc.

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The type of evidence used by linguists in this context consists mainly of learner's intuitions about target language production or elicited responses in grammatical exercises. If adult L2 learners show knowledge of properties of grammar where experience is limited, then they must have access to UG. In this study, following Kanoo(1997), the researcher has adopted this hypothesis to investigate the performance of native English speaking learners of Persian with respect to the Overt Pronoun Constraint (OPC).

2. The Overt Pronoun Constraint

The Overt Pronoun Constraint (OPC) which was originally proposed by Montalbetti (1984) generally states that in pro-drop or null argument languages which allow an overt/null pronominal alternation, an overt pronominal cannot take a quantified antecedent.

In Persian, which is a null argument language, an embedded null subject can take either a quantified (= non-referring) or referential antecedent, or it can be disjoint in reference from other NPs in the sentence, just like overt pronouns in English. This is illustrated in here;

- che kasi goft ke [Ø ye name nevesht]?
Who said that (he) wrote a letter?
- Ali migoyad ke [Ø englisi khoob sohbat mikonad].
Ali says that he speaks English well.

In (a) the null pronoun can be bound to the wh-phrase 'who' without referring to a particular person in the main clause. In (b), on the other hand, the pronoun refers to a particular individual in the main clause, namely Ali. In addition disjoint reference is also possible in both cases, with the pronoun in the lower clause referring to some other person in the discourse.

On the other hand, overt pronouns are more restricted than either null pronouns in Persian as well as other null argument languages or overt pronouns in languages requiring overt argument. In particular an overt pronoun may not have a quantified antecedent as in (a), whereas it can have a sentence-internal referential antecedent, as in (b):

- che kasii goft ke [ooi yek ketab kharid]?
Who said that (hei) bought a book?
- Alii goft ke [ooi yek ketab kharid].
Alii said that hei bought a book.

The OPC is not operative in English, so an overt pronoun can have a quantified antecedent. In English, null subjects cannot be inserted in the embedded subject position in order to refer to the subject in the main clause, while an overt subject like 'he' in the following example can be inserted there; *Someonei believes that hei/j can do it.*

In this example the overt pronoun 'he' can refer to 'someone' or another person not referred to in this sentence. In other words, in English, overt pronouns can receive a bound variable interpretation, contrary to Persian. The question to be dealt with in particular is this; *what is the role of UG in the L2 acquisition of Persian by English speakers?*

3. The Experiment

3.1 Participants:

10 employees (mean age= 34; 6) working at the Embassy of England in Iran served as subjects for this study. All subjects were native speakers of English. They had lived in Iran for several months (from 5 to 11 months). No objective measure of the subjects' overall proficiency in Persian is available. However, since they still have problems at communicating with Persian speakers, one can conclude that they are not talented language learners. 20 adult native speakers of Persian (mean age= 27; 4) served as subjects for the control group.

3.2 Design

An acceptability judgment test (AJT) was employed in this study. Subjects were required to judge whether a given sentence was more or less *acceptable* (as opposed to *grammatical*). Each stimulus included a context followed by two clauses, each representing a different pronoun type (overt vs. null). Each target

sentence was accompanied by a 5-point Likert scale. Value +2 corresponded to *completely* acceptable and value -2 completely unacceptable.

Daneshju ha hafteye gozashte emtehan dadand, ama ostad barge ha ra gom karde ast. Hala...

- har daneshjuyee miguyad ke nomre xubi migerefte ast. -2 -1 0 +1 +2
 - *har daneshjuyee miguyad ke oo nomre xubi migerefte ast. -2 -1 0 +1 +2
- “Students took a test last week, but the professor has lost students’ papers. Now
- each student claims would get a good mark.
 - each student claims he would get a good mark.”

As presented in the above example, there are two constructions in the OPC context: the grammatical constructions [QP*i* ... null*i*], where the null pronoun in the embedded clause is bound by a quantifier in the matrix clause, and the ungrammatical ones [QP*i* ... overt**i*], where the overt pronoun is bound by a quantifier.

The questionnaire contained written instructions, which subjects read before commencing the test. It was highlighted that the researcher was interested in the participant’s opinion regarding a set of sentences which tested how people learn Persian. It also contained explicit instructions regarding how to complete the questionnaire. In addition, it was made clear that subjects were expected to do it as quickly as possible since the researcher was interested only in their *first* intuition. It was also mentioned what the value scale (-2 ... +2) meant; it was emphasized that any combination of numbers was possible (i.e., sentence *a* could be -2 and sentence *b* +1, or sentence *a* 0 and sentence *b* -2, etc.). Although all the instructions were written in English, the test sentences were presented in Persian. This was to encourage the subjects to approach the test from the perspective of Persian grammar. The AJT test consisted of twelve target stimuli. Six extra distractor stimuli were added. They contained other pronominal constructions unrelated to either the OPC.

4. Results

Before presenting the actual results the following hypothesis along with its predictions are formulated:

Hypothesis: In contexts constrained by OPC, L2 learners of Persian (English natives) will show convergent (native-like) intuitions, even though the construction under investigation is not instantiated in their L1 (English).

- *Within-group analysis.* If this is the case, both groups are expected to prefer the grammatical condition (i.e., bound variable reading with null pronoun) to the ungrammatical condition (i.e., bound-variable reading with overt pronoun) significantly. This would confirm that UG (the OPC) guides learners’ knowledge.
- *Between-group analysis.* If this is correct, the non-native (English) group would behave identically to the native group for each condition. In other words, the English and Persian groups would not differ in their acceptance of, first, the grammatical condition and, second, the ungrammatical condition.

The OPC results are presented first in table 1 below. The context (OPC, where a pronoun is bound by a quantifier) is a constant. The pronoun type (overt/null) and the L1 (English/Persian) are the independent variables.

Table 1 Paired Samples *t*-test for OPC Context

	Grammatical[QP <i>i</i> ... null <i>i</i>]	Ungrammatical[QP <i>i</i> ... overt* <i>i</i>]	<i>t</i>	<i>df</i>
Natives	1.93 (.254)	-1.8 (.063)	83.446*	29
Non-natives	1.6 (.7)	-1.5 (.71)	13.286*	9

Note: * = *p* < .05. Standard Deviations appear in parentheses below means.

- *Between-group comparison* was also carried out to examine the English group for each construction against the native norm. The results of independent samples t-test are presented in table 2.

Table 2 *Independent samples t-test for OPC context*

Pronoun type	Natives	Learners	<i>t</i>	<i>df</i>
Grammatical(QPi...Nulli)	1.93 (.253)	1.6 (.67)	1.476	9.8
Ungrammatical(QPi...Overti)	-1.83 (.38)	-1.5 (.71)	-1.9121	10.78

Note: Standard Deviations appear in parentheses below means.

The grammatical condition of the English group was compared against the grammatical condition of the Persian group; in the same way, the ungrammatical condition of the English group was compared against the ungrammatical condition of the Persian group.

The acceptance of the grammatical condition does not differ between native and non-native groups significantly ($t (1.476), p < .05$). This reveals that both groups prefer [QP*i* ... null*i*] to the same extent. In the same way, the rejection of the ungrammatical condition does not differ between groups significantly ($t (-1.9121 = 10.78), p < .05$). This indicates that both groups prefer [QP*i* ... overt**i*] to the same extent. These results are predicted by H2.

5. Discussion and Conclusion

This study has reviewed the status of the Overt Pronoun Constraint in the context of the acquisition of Persian as a second language. Acceptance rate for the OPC condition indicates that Persian natives display a very low acceptance rate for the ungrammatical overt pronoun as a variable bound by QP. They prefer a null pronoun instead. This is compatible with the predictions of the OPC. Adult L2 learners of Persian also demonstrate a strong distinction, preferring null pronouns overt pronouns. This specifies that the grammatical vs. ungrammatical sentences in OPC contexts are categorical rules in both native and non-native grammars of Persian.

Based on the results, it can be assumed that the clear-cut differences for both natives and non-native learners show that learners are demonstrating a (near) native-like behavior with respect to OPC constructions. Regarding the assumption that UG, and in particular, OPC, constrains natives and L2 learners' knowledge of the distribution of overt and null pronominal subjects, this is the expected outcome. Statistical analyses of between group differences/similarities confirm this assumption.

Within-group comparisons with a paired-sample t-test confirm that there is a highly significant difference between the grammatical [QP*i*...overt*j*] and the ungrammatical [QP*i*...null**j*] conditions for the Persian native group. The difference between the grammatical and ungrammatical conditions is also significant for the English group.

The findings of this study are compatible with previous findings (Kanno (1997); Mardsen (1998); Perez-Leroux & Glass (1997). Since both English and Persian speakers discriminate between the grammatical and ungrammatical OPC constructions, as they prefer a null pronoun with a bound variable interpretation but reject an overt pronoun a pronoun with the same interpretation, it can be claimed that they behave similarly in this regard, although the OPC is not operative in English.

The OPC contexts represent a typical logical problem of language acquisition. The OPC effects cannot be learned from the PLD to which learners are exposed, since evidence in the form of negative evidence is not typically available to the learners (the OPC relates to what *cannot* be said rather than what *can* be said). Though OPC results are suggestive, only a small domain of SLA is characterized by OPC. According to Kanno (1997), "...UG is responsible for only a small portion of the many phenomena that arise when an adult attempts to learn a second language" (p. 280).

As a final remark, it can be claimed that there are certainly some universal knowledge and intuitions regarding the grammatical aspects of L2 in the learners' minds. However, they have to be stimulated by a some amount of exposure to the target language in order to emerge. Considering the lack of explicit teaching of the OPC and similar structures, the most plausible explanation is to propose that the findings of this study favor an approach to SLA where learners' knowledge is constrained by UG. As Schwartz and Sprouse (2000) argue, any theory of grammar needs to account for the poverty of the stimulus phenomenon, since they are theory independent. Despite the changes in generative theory, it can be claimed that innate principles of UG can be called upon to account for the learners' subtle knowledge of POS phenomena with regard to pronominal subject distributions.

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