



## The Role of LI Transfer in the Acquisition of English Relative Clauses by Iranian EFL Learners: A Case of Resumptive Pronouns in Persian

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### Abstract

This paper was an attempt to investigate the acquisition of the uninterpretable feature of resumptive pronouns by Persian foreign language learners of English. Tsimpli and Dimitrakopoulou (2007) asserted that uninterpretable features are unavailable in second language acquisition after the critical period. Unlike English which does not allow resumptive pronouns (RPs), Persian shows various behaviors across different relative clauses (RCs). In Persian, RP is ungrammatical in subject, optional in object, and required in object-of-preposition RCs. To examine the status of RPs in learners' interlanguage, a grammaticality judgment test and a translation test were administered to 120 Persian learners of English at three proficiency levels and also to 15 English native speakers. Repeated measures ANOVA was conducted and the results showed that the higher the proficiency of the learners the more native-like they would be in rejecting RPs in English. The results are in line with the predictions of the Interpretability Hypothesis proposed by Tsimpli and Dimitrakopoulou (2007). The findings also provided some theoretical and pedagogical implications for language policy makers especially with regard to age related issue.

**Keywords:** interpretability hypothesis, Persian L2 learners, resumptive pronoun, relative clause

### INTRODUCTION

Resumptive pronouns are parameters which are set differently in different languages. In English, resumptive pronouns are not allowed. In Persian, on the other hand, they are not allowed in subject relative clauses, optional in object relative clauses, obligatory in object-of-preposition positions.

## (1) Subject RC (only –RP)

- Ma mard-i [ke - / \*u kif ra dozdideh bud] ra peyda kard-im.
- They man-REL [that - / he bag had stolen] OM find did-3pl
- We found the man [who (- / \*he) had stolen the bag].

## (2) Object RC (both –RP and +RP)

- Anha mard-i ra [ke ma - / u ra tosyeh kard-im] molaghat kar-and.
- They man-REL OM [we -/he OM recommend-PAST-3pl] visit did-3pl.
- They visited the man [who we recommended].

## (3) Object-of-preposition RC (only +RP)

- Anha mard-i ra [ke ma ba \*-/u sohbat kard-im] molaghat kard-and.
- They visited the man [who we talked to (- / \*him)].

In English, the distribution of RPs is limited and depends on the linear distance, depth, and extractability (McKee & McDaniel, 2001). The larger the distance between the relativized position and the head noun, the more likely an RP would occur in place of a gap. As noted above, unlike English, which only allows gaps in one-level embedded RCs, Persian allows both gaps and RPs in these structures depending on the relativized position. So, English possesses the narrower grammar and is a subset to Persian regarding this syntactic element. According to this subset principle, Persian learners of English have access to a wider grammar while learning English (Berwick, 1985; Wexler & Manzini, 1987). This study investigates the acquisition of three types of English RCs (subject, object, and object-of-preposition), by Persian L2 learners of English. According to Taghvaipour (2005), in Persian RCs are NP initial and are always introduced by an "invariant complementizer *ke*".

According to Interpretability Hypothesis (IH), uninterpretable features are unavailable in SLA after the critical period (Tsimplici and Dimitrakoupoulou, 2007). In other words, acquiring the uninterpretable features in L2 input is very difficult for adult learners because of persistent, maturationally-based L1 effect. Some researchers agree about the IH (e. g., Franceschina, 2002; Franceschina & Hawkins, 2003; Hawkins & Cassilas, 2008; Hawkins & Chan, 1997; Hawkins & Liszka, 2003; Liszka, 2004). Whereas other researchers (e.g., Gavruseva & Lardiere, 1996; Hazdenar & Schwartz, 1997; Lardiere, 1998a, 1998b, 2005, 2007, 2009; McCarthy, 2007, 2008; Prévost & White, 2000) argue that all features are accessible in the L2 but that other factors, such as communication pressures, lead to the observed morphological variability.

RPs are among the uninterpretable features which are not available to adult learners in English (Chomsky, 1995; Kong, 2011; Rezai, 2011; Tsimplici, 2006 among others). Some researchers have approved of Interpretability Hypothesis (Hawkins & Casillas, 2008; Hawkins & Chan, 1997; Kong, 2011; Mendez & Slabakova, 2012; Rezai, 2011). They believe that interpretable features are accessible to L2 learners whereas uninterpretable features are hard to acquire. Their identification and analysis create persistent acquisition problems post-maturationally. These researchers have mainly investigated

the status of RPs in the acquisition of interrogative structures. There have not been enough number of studies focusing on the appropriateness of Interpretability Hypothesis in the acquisition of RCs by Persian learners.

## LITERATURE REVIEW

Yuan and Zao (2005) conducted an empirical study on RPs in English-Chinese and Palestinian Arabic-Chinese interlanguages. As Arabic allows RPs in all positions, the researchers predicted that Arabic speakers would be more accurate in accepting Chinese RPs. They administered an acceptability judgment task containing relative embedded clauses to some advanced and intermediate Arabic learners of Chinese. They also had a control group of nine Chinese speakers. They found that there was no significant difference between all the three groups on the grammatical sentences with gaps in subject, object, and indirect object positions.

Tsimpli and Dimitrakoupolo (2007) discussed the use of the resumptive strategy in Wh-subject and object extraction by intermediate and advanced Greek learners of English. They proposed that the acceptability rate of pronouns in the extraction site is conditioned by the Logical Form (LF) interpretability of the features involved in the derivation. Hence, the first language (L1) specification of resumptive pronouns as clusters of uninterpretable Case and Agreement features resists resetting.

In Iran there have not been many studies conducted on the acquisition of resumptive pronouns. Rezai (2011) investigated the acquisition of uninterpretable features by Persian learners of English. They had 60 subjects in both intermediate and advanced levels complete a 45-item grammaticality judgment task. The analysis of the results, using ANOVA, showed that the intermediate learners showed variability in the use of resumptive pronouns whereas such a variability greatly diminished at the advanced stage of proficiency. Furthermore, there was no significant difference between the subjects' performance on subject extraction context compared to other contexts. The results of their study was discussed in terms of the interpretability hypothesis. In another study, Marefat and Abdollahnejad (2014) examined the status of RPs in Persian L2 learners' of English interlanguage. They developed a grammaticality judgment test and a translation test which were administered to 111 adult Persian learners of English at four proficiency levels and 18 English native speakers. Repeated measures ANOVA results, tracing the effect of proficiency on different RC types, suggested that as their proficiency improves, learners become more native-like in rejecting RPs in English. However, in comparison with the native speakers, even advanced learners showed more marked performance deficits notably in object and object-of-preposition RPs.

Another factor affecting the function of the resumptive pronoun is the extraction site. In this regard, Schachter and Yip (1990) found a significant difference between the acceptability rate of subject and object Wh-extraction by native and non-native Korean and Chinese learners of English. Both L2 groups preferred object over subject Wh-

extractions. In a similar study White and Juffs (1998) found an asymmetry between object and subject Wh-questions with a null complementiser.

In an Iranian milieu with the native language of Farsi there have not been many studies conducted on the acceptability of the position of resumptive pronouns. Also, the specification of resumptive pronouns as clusters of uninterpretable Case and Agreement features in English as an L2 for Persian learners is not well investigated. As such, the researchers in this study investigate the following research questions:

- What is the status of resumptive pronouns in Farsi as L1 and how would it affect English relative clause formation?
- How does the acceptability rate of resumptive pronouns interact with their extraction site?
- Does the proficiency level affect the subjects' judgment of resumptive pronouns?

## **METHOD**

### **Participants**

The participants included 120 adult Iranian learners of English (age range: 19-35) who were chosen randomly from undergraduate students of English, Chemistry, and engineering at Shiraz and Marvdasht Azad universities. They were divided into three proficiency groups of elementary, intermediate, and advanced based on their performance on Oxford Quick Placement Test (2001). Their mother tongue was Persian and had started learning English after the age of 14. Fifteen adult native speakers of English serving as the control group participated in this study. The native speakers were chosen randomly from the tourists coming to Iran and also some were chosen from resident native speakers in Iran.

### **Instruments**

#### ***The Grammaticality Judgment Test***

The grammaticality judgment test included 65 sentences with two options in front of each: grammatical and ungrammatical; the participants are asked to select one of the options based on the grammaticality status of the sentences.

#### ***The Production Task***

The production test is a translation test which requires the participants to translate some Persian sentences. The test has 20 sentences (twelve test sentences and eight fillers) randomly distributed. The test sentences include three [-RP] SRCs, three [-RP] ORCs, three [+RP] ORCs, and three [+RP] ORCs.

## Procedure

The test of grammaticality judgment test and the production test were given to the subjects. Using ANOVA, the researchers will study how Persian L2 learners of English at different proficiency levels judge the position of resumptive pronouns in English sentences. It will be studied how L1 uninterpretable features of Case and Agreement would affect L2 acquisition.

## RESULTS

### Results obtained from GJT

Table 1 presents the percentage of responses for each RC type with and without RP across the levels. As we see, the advanced group rejects the RC if there is an RP in it. Therefore the means for RCs at advanced levels are low. But for the other groups, RCs with RP are as acceptable as RCs without RPs; hence, the means are so high.

**Table 1.** Descriptive statistics for the percentage mean of RCs with and without RP across levels

		Subject RC		Object RC		Object of Prep. RC	
		[-RP]	[+RP]	[-RP]	[+RP]	[-RP]	[+RP]
Elementary N= 40	Mean	73	65	68	75	48	3
	SD	22	28	19	24	29	26
Intermediate N= 40	Mean	76	66	68	79	50	71
	SD	20	20	22	19	30	22
Advanced N= 40	Mean	87	17	84	27	74	24
	SD	21	29	22	41	24	36
Native N= 15	Mean	95	4.4	93	6.7	24	36
	SD	10.96	10.96	13	11	86	8.88

### Within group analysis

Repeated measures ANOVAs were performed at each proficiency level on mean percentages of responses, treating RC as the within group, and RP as between group variables. The results of the study showed that the roles of RP and different RC types varied at different proficiency levels. At the elementary level, the results of the analysis showed that RC type ( $F=15.945$ ,  $P=0.00$ ) had a main effect, but RP did not ( $F=2.431$ ,  $P=0.12$ ). But the interaction between RP and RC was significant ( $F=10.205$ ,  $P=0.002$ ).

The significant interaction means that RP has different effects across different RCs. Further analysis showed that RPs developed acceptability of object-of-preposition RCs ( $t=2.341$ ,  $P=0.02$ ). This effect was not observed for subject and object RCs ( $P>.05$ ).

In the intermediate level, the RC type had a significant effect ( $F=33.39$ ,  $P=0.000$ ). Just like the elementary level, the RP type did not have a significant main effect ( $F=0.928$ ,  $P=0.430$ ). The interaction between RP and RC was significant. This means that RP has a

similar effect on the acceptability of RC at different proficiency levels. At the intermediate level, like the elementary level, the participants accepted object-of-preposition RCs with RPs significantly more than those without. But the presence of RP did not affect the acceptability of subject and object RCs.

In advanced level, the type of RC had no effect on the participants' performance ( $F = 0.651, P = 0.583$ ). RP had a main effect ( $F = 21.225, P = 0.000$ ). But the interaction turned out not to be significant ( $F = 0.551, P = 0.583$ ). At the advanced level, RCs with RP were less acceptable.

As for native speakers, the analysis of the data showed that RC had no main effect ( $F = 0.893, P = 0.353$ ), but RP had a main effect ( $F = 26.593, P = 0.000$ ). This group's means were significantly higher in RCs without RP. The interaction between RP and RC turned out not to be significant ( $F = 0.770, P = 0.388$ ).

### ***Between-group analysis***

At this stage, the participants' performance on each of the RC types was compared through one-way ANOVA. The results showed that groups are different from each other in all RC types ( $P < .05$ ). In order to see where the differences lay, post-hoc Tukey test was applied. The results showed that in RCs without RP, advanced L2 learners performed better than elementary and intermediate levels. But their performance was similar to the native speakers. As for RCs with RP, advanced L2 learners' performance is like native speakers only in subject RCs. In object and object-of-preposition RCs with RPs, advanced L2 learners accepted more sentences than native speakers.

### **Results obtained from the production test**

In this part 120 participants took part in the study. Table two presents the percentage of correct translations given by each level for each of the four structures. Advanced learners had the highest percentages of correct translations. Besides, the highest percentages of RC type belonged to the subject RC type.

**Table 2.** Descriptive statistics for percentage mean of the correct translations of RCs across levels

		Subject RC	Object RC	Object of Prep.	
		[-RP]	[-RP]	[+RP]	[+RP]
Elementary N= 40	Mean	27.33	30.33	33.	0.00
	SD	22	33	23	33
Intermediate N= 40	Mean	91	79	29	24
	SD	22.33	27	23	35
Advanced N= 40	Mean	100	100	97.66	97.66
	SD	00.00	00.00	08.33	89.99

### ***Within group analysis***

Repeated measures ANOVA results for the elementary level showed that the type of RC had a main effect ( $F=17.276$ ,  $P=0.000$ ). Further analyses showed that subject RCs had a significantly better performance than object RCs with RP and object-of-preposition RCs.

At the intermediate level, quite like elementary level, RC type had a main effect ( $F=52.726$ ,  $P=0.000$ ). And further analyses showed the same results as for the elementary level. Subject RCs had a significantly better performance than object RCs. And both had a significantly better performance than object RCs with RP and object-of-preposition RPs.

However, at the advanced level, RC type had no effect ( $F=24.31$ ,  $P=0.12$ ). Students at the advanced level had a very good performance at all RC types. In other words, they could make a distinction between the status of RP in Persian and English.

### ***Between group analysis***

To see if different levels performed differently on each of these RC types, the researchers conducted one-way ANOVAs. The results showed that there was no significant difference among the groups in subject RCs ( $F= 0.828$ ,  $P=0.330$ ). But the level of proficiency had a significant effect on all the other RC types ( $P < .005$ ).

Post-hoc LSD results showed that in object RCs without RP, the advanced level group performed significantly better than all the other groups. Other groups had a similar performance in this regard. As for the object RCs with RP, the advanced level group performed significantly better than all the other groups. But the other levels did not differ from each other significantly. It means that students at the advanced level could translate Persian object RCs both with and without RPs into [-RP] English RCs. In object-of-preposition RCs, the advanced level had a significantly better mean than the other levels. Other groups did not differ significantly from each other in this RC type.

## **DISCUSSION**

### **Grammaticality judgment test**

Participants at different levels have different interpretations regarding the grammaticality of different RC types. At the elementary and intermediate levels, participants consider RP obligatory in object-of-preposition RCs but optional in the other two RC types. Their grammaticality judgment varies at different RC types. Can we consider this phenomenon as an L1 transfer? Maybe not. In Persian there is no subject RC with RP. But the participants at the aforementioned levels have accepted subject RCs and object-of-preposition RCs with RP. This finding is contrary to L1 transfer. The acceptability of [+RP] subject RCs is significantly lower than [+RP] object-of-preposition RCs. The fact that RP was optional in object RCs might show L1 transfer. Also the need for RP in object-of-preposition RCs reflects L1 transfer. Because a property of Persian prepositions is that they should always be followed by an object. All in all, the elementary

and intermediate students have transferred the RP feature to their L2, irrespective of RC type. We can interpret their behavior through the Subset Principle (Berwick, 1985; Manzini, 1987). Persian learners face positive evidence for the presence of the gap in English RCs and they lack negative evidence for ungrammaticality of RPs. As a result, they transfer these into their L2 and overgeneralize it to all structures including subject RC which has gaps in their L1 and L2. Looking at the results of the GJT, especially at lower levels, the researchers saw that the participants had used RPs in all RC types. This finding verified the predictions made by the Subset Principle. At higher levels, because of higher proficiency and enriched input learners notice this wrong overgeneralization and do not use RPs in all RC types.

At the advanced level, there is a steep negative correlation between RP and RC types. Unlike the lower levels, the advanced participants successfully dropped the L1 uninterpretable feature. They seem to have noticed the inaccuracy of subject and object RCs with RP. This finding is in line with L1 transfer. It goes without saying that at the advanced levels, although the participants performed significantly different from the lower levels, they were not as competent as native speakers at rejecting RPs, especially in object and object-of-preposition RCs. The advanced learners did not completely do away with the RPs, a fact which is in line with IH.

### **Production test**

Participants at elementary and intermediate levels for [+RP] object and object-of-preposition RCs mostly used RP in their Persian-to-English translations incorrectly. On the other hand, they used less RPs in their translation of subject and [-RP] object RCs. The reason might be their verbatim translation from Persian into English. They used RPs in their translations when they saw them in the Persian equivalents. Another interpretation in this regard might be L1 transfer. Because there was significantly more accuracy in not producing RPs in subject RCs than the object-of-preposition RCs especially at lower levels.

Compared with lower levels, the participants at the advanced levels showed more accuracy in their translations of [+RP] RCs (93, 58%) and even more at [-RP] RC structures (98.89%). Since the translation task is not applicable to native speakers, we cannot compare the results of nonnative speakers' translation task with native speakers'. But comparing the performance of advanced learners in object and object-of-preposition RCs with that of subject RCs especially at advanced levels was somehow revealing. The participants at elementary and intermediate levels were not accurate enough at RC translations. At the advanced level, the participants were highly accurate (98.89) in the translation of subject RCs, but less accurate for the object and object-of-preposition RCs (93.58). The reason for this inaccuracy especially at the advanced levels for the object and object-of-preposition RCs is the fact that they have not been able to reset the RP parameter; the fact which is based on Interpretability Hypothesis (Tsimpli & Dimitrakopoulou, 2007) according to which resetting of the language parameters related



to LF-uninterpretable / PF interpretable features cause learnability problems for L2 learners and prevent them from achieving a native-like syntax of L2 beyond the critical period.

## CONCLUSION

This study investigated the status of RPs in three English RC types in the interlanguage of Persian learners of English at different proficiency levels. The results of the study showed that the Persian learners at lower levels used RPs less in object-of-preposition than objects. This fact disapproved of L1 transfer. At lower levels, the learners even verified the use of RPs in subject RCs, which is forbidden in Persian. On the other hand, the findings showed that the more proficient the learners become, the more native-like they would be in rejecting RPs. As for the advanced learners, the findings of the study showed that they were not as competent as native speakers in rejecting RPs in object and object-of-preposition RCs. But they could achieve native-like proficiency in rejecting RPs in subject RCs. These findings are in line with the predictions of the Interpretability Hypothesis proposed by Tsimpli and Dimitrakopoulou (2007). Based on CASP model proposed by Filipovic and Hawkins (2013), the learners look for the easiest ways to acquire the L2 at initial stages. As for the acquisition of English RCs, the easiest way for the Persian learners is to transfer their L1 rules directly. Psycholinguistically speaking, using an RP in the RC decreases the load on memory and is easier to process. As such, the Persian learners generalize this rule and use RPs for all RC types, even subject RCs which accommodate RPs neither in their L1 nor in their L2. As they become more proficient, the Persian learners realize the ungrammaticality of RPs in English RCs and little by little discard them.

Pedagogically, the findings of this study have implications for language educators. Analyzing the interlanguage of Persian L2 learners of English, the language educators would understand how Persian L2 learners would acquire L2 RCs regarding the status of resumptive pronouns. The findings of this study will also provide some implications for age-related issues in L2 teaching. The sooner the language learners start their job, the more native-like they would become. The effect of proficiency level on the acquisition of resumptive pronouns would have implications for language teaching policy makers.

This study investigated the grammaticality judgments of resumptive pronouns in different RC types by adult foreign language learners. Since the researchers did not have access to younger foreign language learners who studied English before the critical period, they could not compare the effect of age before and after the critical period in this regard. Future research might compare the role of age in the learners' grammaticality judgment of resumptive pronouns in different RC types by comparing different age groups. Another limitation was that the translation test could not be given to native speakers. Future research might use some English native speakers who know Persian so that the researchers would be able to compare the results of the translation tests given to Persian and English native speakers.

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