Competence Differences Between Native and Near-Native Speakers: Is Puberty the Cut-off Age for Access to UG?

Sogand Noroozizadeh

K.N. Toosi University of Technology, Iran

Contradictory findings of SLA researchers have motivated a variety of opposite viewpoints concerning the availability of UG in L_2 acquisition. Moreover, there is a recent, renewed interest in the claims made by the proponents of the Critical Period Hypothesis (CPH) according to which UG's active role in L_2 acquisition is likely to decline after puberty. The present study sought to scrutinize the role of UG and age of onset in L2 acquisition. In fact, the study was specifically aimed at determining whether there was any significant difference between native speakers of English and Iranian near-native speakers of the language in terms of their access to Binding Conditions A and B. It was also an attempt to probe into the pervasive 'the younger, the better' myth concerning the relevance of UG to L_2 acquisition. The participants in the study were mainly 30 male and female native speakers of English and 60 male and female Iranian near-native speakers of the language among whom 30 had first been exposed to English before puberty and 30 after puberty. The required data were basically obtained through the administration of two tests, one on general English syntax and the other on Binding Principles A and B. The data were analysed through analyses of covariance (ANCOVA) and two-way analyses of variance (Two-Way ANOVA). In short, the findings of the study provided empirical evidence in favor of UG's mediation in L_2 acquisition and against the position held by the proponents of the CPH according to which UG is likely to lose its active role in L_2 acquisition after puberty. Moreover, the flexibilities inherent in the Persian language concerning the Binding

> Conditions as proposed in the GB framework tend to minimize, if not totally rule out, the possibility that the subjects' access to Binding Theory as a subsystem of UG might have been affected by their underlying knowledge of Persian.

According to White (2003, p. 2), arriving at a linguistic system which accounts for the input to which the child is exposed is, indeed, the major task of L1 acquirers. Proposed as part of an innate biologically endowed language faculty (Chomsky, 1965, 1981b; Pinker, 1984, 1994), UG allows the L1 acquirers to arrive at a grammar on the basis of the linguistic experience the child has had. In fact, what grammars can (or cannot) be like, is determined in advance by the blueprint that is provided by invariant principles of UG that are true across all languages as well as parameterized principles whose values vary from one language to another. The following are the arguments that have been proposed in favor of some sort of a biological basis to L1 acquisition such as the 'learnability' argument according to which there is a discrepancy between the utterances to which a child is exposed and the unconscious grammatical knowledge that is acquired by the child. The mismatch leads to the 'logical problem' of language acquisition or the 'poverty of the stimulus' argument. In fact, without assuming a built-in system of universal linguistic principles and grammatical properties, it would be impossible to account for L1 acquirer's achievement (Baker & McCarthy, 1981; Hornstein & Lightfoot, 1981).

So far, UG has been discussed as a system of principles and parameters providing constraints on grammars in the course of L1 acquisition and adult native-speaker grammars. Similar to L1 learners, the L2 learners are also faced with the need to arrive at a linguistic system which can account for the L2 input. Given this similarity, since the early 1980s, the question of UG's mediation in L2 acquisition has been studied by the Second Language Acquisition (SLA) researchers. The first decade of this research has been largely devoted to the so-called *access* issue, namely the question of the 'availability' of UG in non-primary acquisition (White, 2003, p. 15).

The viewpoints held by researchers concerning the relevance of UG to L2 acquisition vary from the *full access* to the *no access* hypotheses on opposite ends of the continuum. The proponents of the *full access* hypothesis claim that adult L2 learners not only observe UG principles but also acquire appropriate parameter settings on the basis of the values triggered by exposure to L2 input (Cook, 1985, 1988; Gregg, 1996; Thomas, 1991; White, 1989, 1996). By contrast, the proponents of the *no access* hypothesis argue that UG is not accessible to L2 learners because the learners benefit from non-linguistic, problem-solving strategies which, unlike those of their LI, are not unique to language (Bley-Vroman, 1990; Clahsen & Muysken, 1986; Schachter, 1989). Somewhere in the middle, the advocates of the *partial access* hypothesis claim that certain subparts of the UG are inaccessible or less accessible to L2 learners (Hawkins & Yeut-Hung Chan, 1997).

Some SLA researchers have recently shown a renewed interest in the claims made by the proponents of the Critical Period Hypothesis (CPH) according to which after puberty, the achievement of a native-like mastery in an L2 is difficult, if not unlikely (Lenneberg, 1967; Penfield & Roberts, 1959). In fact, these researchers are interested in finding out whether the L2 learners have access to UG after puberty or not.

Nevertheless, the existing empirical findings do not allow unequivocal interpretations concerning the degree of success which can possibly be attained by adult L2 learners. Coppieters (1987), for instance, found no non-native speakers of French in the range of native speakers of the language. By contrast, Birdsong (1992) found a much lower incidence of divergence of near-native speakers of French from their native counterparts. Sorace (1993) further revealed instances of *divergence* in the near-native grammar of Italian developed by the French subjects and evidence of *incompleteness* in the near-native grammar of Italian developed by the English subjects. White and Genesee (1996), however, found no significant difference between native and near-native speakers of English in terms of UG's mediation in L2 acquisition. They also found out that the subjects' age of onset did not have any significant effect on their access to UG.

This study, building upon the aforementioned studies and their findings, specifically seeks to answer the following research questions:

(1) Is there any significant difference between native speakers of English and Iranian near-native speakers of the language in terms of their underlying knowledge of Binding Principles A and B?

(2) Is there any significant difference among native speakers of English and Iranian pre-puberty and post-puberty near-native speakers of the language in terms of their underlying knowledge of Binding Principles A and B?

(3) Is there any significant difference between native speakers of English and Iranian near-native speakers of the language in terms of their underlying knowledge of Binding Principle A vs. that of Binding Principle B?

(4) Is there any significant difference among native speakers of English and Iranian pre-puberty and post-puberty near-native speakers of the language in terms of their underlying knowledge of Binding Principle A vs. that of Binding Principle B?

METHOD

Instruments

The instruments employed in the study comprised a test of Syntax (that is, Barron's 1987 College Board Standardized Achievement Test) and a test of Binding. The former test actually provided an objective means for distinguishing truly near-native subjects from those Iranians whose syntactic competence was not native-like. It contained 40 multiple-choice items developed based on subtleties of the English syntax. Each item of the test had four underlined words or phrases marked (A), (B), (C) and (D). To further increase the difficulty level of the test, the test designers had also added an extra *No Error* choice marked (E) which also required the testees to determine whether each item of the test did actually contain an error or not. The subjects were to

identify the underlined word or phrase in each sentence which might render the sentence incorrect. Therefore, if the subjects had any doubts, they could not come up with the right answer. Having administered this test, the researcher could obtain reliable data concerning the subjects' underlying knowledge of subtle syntactic problems that were most likely to handicap non-native speakers of English who were not highly proficient speakers of the language. In other words, only those subjects who had successfully developed a native-like mastery of English would be able to perform in a way which was much similar to that of the native speakers of the language. The test of Binding also included 40 items which provided an objective measure of the subjects' underlying knowledge of Binding Conditions A and B. To investigate into the subjects' underlying knowledge of these two principles, the researcher used the following two types of grammaticality judgment tasks:

Type 1: This task required the subjects to determine whether the antecedents which had been specified for the underlined anaphors (reflexives and reciprocals) and pronominals were mutually coreferential or not. If not, the subjects were also required to provide the necessary corrections so that a proper coreferential relationship could be established between the underlined words in each item.

Examples of Type 1

(1) Those who know <u>Mary</u> hate <u>herself</u>.
   a. Grammatical
   b. Ungrammatical

(2) <u>The students</u> preferred <u>each other</u> to do the experiment.
   a. Grammatical
   b. Ungrammatical

(3) <u>Jack</u> saw a photograph near <u>him</u>.
   a. Grammatical
   b. Ungrammatical

Type 2: This task required the subjects to identify the nouns or pronouns which they, themselves, suggested to be mutually co-referential for the anaphors and pronominals which were underlined in each item.

Examples of Type 2
(1) <u>Jane</u> talked to Mary about <u>herself</u>.
   a. Mary
   b. Either Jane or Mary
   c. Jane
(2) The politicians realized that criticizing <u>each other</u> would be inappropriate.
   a. The politicians
   b. Some other people
   c. Either the politicians or some other people
(3) The hosts introduced the guests to <u>each other</u>.
   a. The hosts
   b. The guests
   c. Either the hosts or the guests

Finally, it should be noted that both tests also elicited information as to the subjects' sex, age, level of education, years of continuous residence abroad and age of onset (that is, the age at which they were first exposed to English as their foreign language). However, in order to make the subjects feel at ease while answering the tests, they were allowed to remain anonymous.

Subjects

There were 30 male and female native speakers of English who served as the control group. They were, at least, BA or BS holders whose age varied from 30 to 45. The other group was composed of 110 male and female Iranian, highly proficient translators, interpreters, English news announcers, highly qualified and experienced English teachers as well as highly advanced students of or Ph.D in TEFL or English Literature. Their age varied from 25 to 45. It was intended to identify near-native speakers of English (from among the total population of 110 Iranian speakers of the language participating in the study) based on their scores on the test of English syntax. In other words, the Iranian subjects whose scores on the test of English syntax ranged between +/-2 standard deviations from the native speakers' mean on the same test were to be identified as near-native speakers of the

language. Moreover, the non-native participants in the study were to be divided into two groups－namely, pre-puberty and post-puberty subgroups－based on whether their age of first exposure to English was *before or after* puberty.

Data Analysis

The scores of the total subjects (participating in the study) on both tests were summarized and tabulated through tables showing the descriptive statistics of the tests. Having identified the near-native subjects based on the criterion mentioned above, the researcher further subjected the scores of the native and near-native participants to two analyses of covariance (ANCOVA) to answer the first two research questions and two two-way analyses of variance (Two-Way ANOVA) to answer the second two research questions.

It is worth mentioning that an extremely high correlation coefficient was found between the Syntax and Binding scores. Moreover, since the near-native subjects had been identified within a rather vast range of +/-2 standard deviations from the mean of native speakers, the researcher suspected that she might have failed to control possible, pre-existing differences among the aforementioned groups' underlying knowledge of syntax. Therefore, to minimize the possible effect of such differences in the Syntax scores as an uncontrolled variable on the dependent variable of Binding scores, the researcher decided to run a robust statistical test, namely ANCOVA.

RESULTS AND DISCUSSION

Table 1 displays the descriptive statistics for the Syntax scores of 30 native controls and 110 Iranian non-native speakers of English among whom truly near-native speakers of the language were expected to be found.

TABLE 1
Descriptive Statistics for Syntax Scores of Natives and Non-Natives

Group	N	K	X	SD	Range
Native	30	40	33.10	1.54	5 (31-36)
Non-native	110	40	28.76	4.34	15 (20-35)

Based on the information presented in the above table, the nonnative subjects whose scores fell within the range of +/– 2 standard deviations from the mean of the natives on the test – (i.e., 33.1 ± 2 (1.54) - were identified as near-native speakers of the language. Accordingly, 60 near-native speakers were identified.

Table 2 displays the descriptive statistics observed for the Syntax and Binding scores of 30 native speakers of English and 60 Iranians whose command of the English syntax was statistically shown to be native-like.

TABLE 2
Descriptive Statistics for Syntax and Binding Scores of Natives and Near-Native

TEST	Group	N	K	X	SD	Range	rxy
Syntax	Native	30	40	33.10	1.54	5 (31-36)	
	Near-native	60	40	32.15	1.54	5 (30-35)	
Binding	Native	30	40	34.47	1.33	4 (33-37)	.95*
	Near-native	60	40	33.63	1.41	5 (32-37)	.95*

*P<.001

The table shows that the performance of near-natives on the test of Syntax was similar to that of the natives. The standard deviations of the scores obtained by both groups are identical (1.54) while the mean obtained by near-natives (32.15) is very close to that of the natives (33.10). Likewise, the performance of the two groups on the test of Binding looks quite similar. The mean of the native speakers' scores is 34.47 while that of the near-natives is 33.63. The dispersion of the scores in the native and near-native groups as indicated by their standard deviations (1.33 and 1.41, respectively) is rather similar. Furthermore, the table shows a very high correlation (.95)

between the Syntax and Binding scores obtained by both groups.

Since the subjects' Syntax scores showed an extremely high correlation with their Binding scores, the dependent variable of Binding scores was likely to have been affected by possible, pre-existing differences between the native and near-native groups in terms of their underlying knowledge of general English Syntax as an uncontrolled variable. Therefore, to determine whether there was any significant difference between native speakers of English and Iranian near-native speakers of the language in terms of their underlying knowledge of Binding Conditions A and B, the Syntax scores obtained by both groups were subjected to an ANCOVA. In fact, this was an attempt to minimize the effect of the subjects' varying levels of syntactic competence in English. The following table displays the results of the analysis:

TABLE 3
Results of ANCOVA Run for Binding Scores of Natives and Near–Natives

Source of variation	Sum of squares	DF	Mean of squares	F	Sig.
Covariate(Syntax)	151.900	1	151.900	755.170	.000
Main Effect(Group)	.009	1	.009	.045	.833
Explained	165.789	2	82.895	412.109	.000
Residual	17.500	87	.201		
Total	183.289	89	2.059		

When the effect of possible, pre-existing differences between the above groups' knowledge of English Syntax was covaried out, the results revealed that the subjects' *group* (native vs. near-native) had no significant effect on their underlying knowledge of Binding Principles. In other words, no group performed significantly differently from the other groups on the test of Binding.

To find out whether the Critical Period could possibly affect the subjects' underlying knowledge of Binding Conditions A and B, the researcher made a further distinction between those Iranian near-native speakers of English

whose first exposure to the language had occurred *either before or after* puberty. Table 4 displays the descriptive statistics for Syntax scores of the natives and near-native sub-groups (pre-puberty vs. post-puberty).

TABLE 4
Descriptive Statistics for Syntax and Binding Scores of Natives,
Pre- puberty and Post-puberty Near-natives

Test	Group	N	K	X	SD	Range	r xy
Syntax	Native	30	40	33.1	1.54	5 (31-36)	
	Pre-puberty	30	40	32.6	1.55	5 (30-35)	
	Post-puberty	30	40	31.7	1.42	4 (30-34)	
Binding	Native	30	40	34.47	1.33	4 (33-37)	.95*
	Pre-puberty	30	40	33.90	1.54	5 (32-37)	.95*
	Post-puberty	30	40	33.37	1.25	4 (32-36)	.94*

*$P<.001$

Table 4 indicates that the three groups performed rather similarly on both tests. As the near-natives were selected based on their Syntax scores, the comparability of the scores of pre-puberty and post-puberty subgroups on the same test was not un-predictable. However, the mean scores obtained by the natives, pre-puberty and post-puberty near-natives on the test of Binding (34.74, 33.90, and 33.37, respectively) and their standard deviations (1.33, 1.54, and 1.25) also fell within a very narrow range which seemed to support the comparability of their performance on the test of Binding, too. Moreover, very high correlation coefficients (.95, .95, and .94) were observed between their scores on the test of Binding and Syntax.

To determine whether age of onset could possibly affect the near-native subgroups' underlying knowledge of Binding Principles, an ANCOVA was run on the scores of the three groups, taking the Syntax scores as the covariate and the Binding scores as the dependent variable. Table 5 displays the results.

TABLE 5
Results of ANCOVA Run for the Binding Scores of Native,
Pre-Puberty and Post-puberty Near-native Sub-Groups

Source of variation	Sum of squares	DF	Mean of squares	F	Sig.
Covariate (Syntax)	148.514	1	148.514	768.526	.000
Main effect (Group)	.890	2	.445	2.032	.106
Explained	166.670	3	55.557	287.492	.000
Residual	16.619	86	.193		
Total	183.289	89	2.059		

The results revealed that the subjects' *age of onset* (pre-puberty vs. post-puberty) had no significant effect on their underlying knowledge of Binding Principles, (that is, no group performed significantly differently from the other groups).

Since Binding Principle A as opposed to Binding Principle B is subject to parametric variation (Wexler & Manzini, 1987), a further distinction was made between the scores of subjects on items testing Binding Condition A vs. those testing Binding Condition B. The following table provides the descriptive statistics for the scores of the natives and near-natives on items testing Binding Principle A and B, separately.

TABLE 6
Descriptive Statistics for Scores of Natives and Near-natives
on Items Testing Binding Principle A vs. B

Principle	Group	N	K	X	SD	Range
A	Native	30	20	17.1	1.24	5 (14-19)
	Near-native	60	20	16.70	1.63	6 (13-19)
B	Native	30	20	17.37	1.10	4 (15-19)
	Near-native	60	20	16.93	1.23	5 (14-19)

The above table shows that there were only slight differences between the two groups' performance on the items testing each principle. However, to

determine whether there was any significant difference between native speakers of English and Iranian near-native speakers of the language in terms of their underlying knowledge of Binding Condition A vs. Binding Condition B, a two-way ANOVA was run on the subjects' scores. The interaction between *Principle* and *Group* could reveal whether any group (native vs. near-native) performed statistically differently from the others on either of the two types of items. The results of the analysis are presented in Table 7 below.

TABLE 7
Two-Way ANOVA Run for Scores of Natives and Near-Natives
on Items Testing Binding Principle A vs. B

Source of variation	Sum of squares	DF	Mean square	F	Sig.
Main effects	9.444	2	4.722	2.549	.810
(Principle)	2.500	1	2.500	1.350	.247
(Group)	6.944	1	6.944	3.749	.054
Two-way Interaction (Principle) (Group)	.011	1	.011	.006	.938
Explained	9.644	3	3.215	1.736	.161
Residual	326.000	176	1.852		
Total	335.644	179	1.875		

The results delineated in Table 7 actually indicated that *Group* (native vs. near-native) had no significant effect on the subjects' performance on Binding Principle A vs. Binding Principle B (i.e., no group performed any better than the others on either type of the Principles).

At this stage, two subgroups of Iranian near-native speakers of English were further distinguished on the basis of age of their first exposure to the language varying *either before or after* puberty. This was an attempt to find out whether the subjects' *age of onset* could possibly have any significant effect on their underlying knowledge of Binding Principle A vs. that of Binding Principle B. Table 8 displays the descriptive statistics for the scores of native speakers of English and Iranian near-native subgroups (pre-puberty

vs. post-puberty) on the basis of their performance on items testing Binding Principles A and B, respectively.

TABLE 8
Descriptive Statistics for the Scores of the Three Groups
on Items Testing Binding Principle A vs. Binding Principle B

Principle	Group	N	K	X	SD	Range
A	Native	30	20	17.1	1.24	5 (14-19)
	Pre-puberty	30	20	16.9	1.69	6 (13-19)
	Post-puberty	30	20	16.5	1.57	6 (13-19)
B	Native	30	20	17.37	1.10	4 (15-19)
	Pre-puberty	30	20	17.00	1.26	5 (14-19)
	Post-puberty	30	20	16.87	1.22	5 (14-19)

The above table indicates slight differences among the scores obtained by each group on either type of items. To determine whether there was any significant difference among native speakers of English and Iranian Pre-puberty and Post-puberty near-native speakers of the language in terms of their underlying knowledge of Binding Principle A vs. that of Principle B, a *two-way ANOVA* was run on the subjects' scores on items testing Binding Principles A and B, respectively. The results are delineated in the following table:

TABLE 9
Two-Way ANOVA Run for Scores of the Three Groups
on the Two Types of Binding Items

Source of variation	Sum of squares	DF	Mean square	F	Sig.
Main effects	11.767	3	3.922	2.111	.101
(Principle)	22.689	1	2.689	1.447	.231
(Age of onset)	9.078	2	4.539	2.443	.090
2-way Interaction (Principle) (Age of onset)	.544	2	.272	.146	.864
Explained	12.311	5	5.462	1.325	.256
Residual	323.333	174	1.858		
Total	335.644	179	1.875		

According to Table 9, the subjects' *age of onset* had no statistically significant effect on their underlying knowledge of Binding Conditions A and B. In other words, no group performed significantly differently from the other groups on either type of the items.

CONCLUSION

To summarize, this study was an attempt to shed some light on the controversial issue of UG's relevance to L2 acquisition, on the one hand and to probe into the pervasive *'the younger, the better myth'* concerning L2 acquisition, on the other. On the basis of the results of the analyses incorporated in the study, the following conclusions were drawn:

(1) Binding Principles as a subsystem of UG are accessible to Iranian near-native speakers of English,

(2) The relevance of UG to L2 acquisition is independent from the L2 learners' age of onset varying either *before or after* the age at which puberty is usually expected to take place,

(3) Although Binding Condition A is subject to parametric variation, Iranian near-native speakers of English showed no statistically significant difference from the native controls in terms of their underlying knowledge of Binding Condition A as opposed to that of Binding Condition B and finally,

(4) Those near-native speakers of English who had first been exposed to English at a very early age were not more proficient than their adult counterparts with respect to their performance on the two types of Binding tasks.

In other words, the pervasive *'the younger, the better'* myth to which the proponents of the Critical Period Hypothesis (CPH) have given birth was not confirmed by the findings of the present study. In short, the aforementioned findings could provide clear-cut evidence in favor of UG's mediation in L2 acquisition and against the position held by the proponents of the CPH

according to which the active role of UG in L2 acquisition is assumed to decline after the age at which puberty takes place.

IMPLICATIONS

The findings of the present study could provide evidence in favor of UG's availability in L2 acquisition. It is worth mentioning that Miremadi (1996) and Golfam (1998) note that some sentences in Persian, though grammatically acceptable, show deviations from the Standard Binding Theory. Despite the fact that in compliance with Principle A of the Binding Theory, an antecedent must c-command a reflexive pronoun, Golfam (1998, p. 78) reported cases in Persian where scrambling had resulted in the failure of c-command. However, the sentence was still grammatical.

(1) Be xodash$_i$ Ali$_i$ xandid.
    To himself Ali laughed _he
    'Ali laughed at himself.'

As further reported by Golfam, the following sentence is another instance of the flexibility of the Persian language with respect to observing Principle A of the Binding Theory:

(2) Ali$_i$ fekr mi-kon-ad ke ra?is$_j$ az xodas$_{i/j}$ razi basad-.
    Ali thinks PRE-do-he that boss from himself satisfied be-he
    'Ali thinks that the boss is satisfied with him'.

While Binding Principle A requires anaphors to be bound within their minimal governing category, the above Persian sentence is an instance of the reflexive pronoun being bound *beyond* its minimal governing category in special discourse contexts.

Similarly, Miremadi (1996, p. 110) had reported another instance of a

Persian sentence which he found problematic for Binding Principle A because the reflexive pronoun was not bound *within* its governing category:

(3) (a) Ali**i**   xodas**j** ra dust dar-ad na baradar-as**i** ra.
         Ali himself do friend has-he not brother-his do
         'Ali likes himself rather than his brother'.

   (b) *Ali**i**   xodas**j** ra dust dar-ad na baradar-as**j** ra.*
         Ali himself do friend has-he not brother-his do
         'Ali likes himself rather than his brother'.

However, as quoted by Golfam (1998, p. 101), Moyne (1971) believes that *xodas* in such contexts is an *emphatic*, not a reflexive, pronoun. Therefore, it could have a non-local antecedent. Golfam (p. 107) also stated that the same thing holds in Persian:

(4) Alii fekr mi-konad [Amirj ? az xodashi bizar   ¿ast-o] (marked)
    Ali thought PRE-do-he Amir from himself disgusted is-he.
    'Ali thinks that Amir hates him.'

Therefore, Golfam came to the conclusion that Persian anaphors must be studied at the two levels of syntax and discourse. The syntactic analysis of Persian anaphors regards reflexives as those anaphors which are *c-commended* and *bound* by a noun phrase within their minimal governing category. However, the discourse level accounts for emphatic pronouns which bear contrastive stress and fail to be locally bound or c-commanded by their binder. The foregoing facts led Golfam (p. 219) to argue that Government and Binding (GB) Theory *cannot* account for *anaphora* in the Persian Language.

Miremadi (1996, p. 112) also mentioned instances of Persian sentences in which *both* anaphors and pronominals could appear. Obviously, Persian sentences such as the following are problematic with respect to principles A and B of Binding Theory:

(5) (a)   Mo?alleman sagerdan-esan ra dust dar-and.

         teacher-PL student-PL-their do friend have they

         'Teachers like their students'.

    (b)   mo?alleman sagerd-an-e yekdigar ra dust dar-and.

         teacher-PL student-PL-EZ each other do friend have they

         'Teachers like each other's students'.

According to Rahimi (2000, p. 182), Persian reflexive and reciprocal pronouns are allowed to have *both* local and nonlocal antecedents which are not completely coreferential. In fact, this is in contrast to Binding Principle A in Government and Binding (GB) Theory which requires both reflexive amd reciprocal pronouns to be locally bound to their coindexed antecedents. In short, the aforementioned instances of Persian sentences reveal that in Persian, violations of Binding Conditions are taken as grammatical. These deviations minimize, if not totally rule out, the possibility that the subjects' access to Binding Conditions A and B might have been affected by their underlying knowledge of Persian.

It is concluded that L2 learners are capable of resetting their L1 parameter settings on the basis of the values which are appropriate in the L2. Therefore, to trigger parameter resetting, it is the task of the L2 teachers to provide the learners with appropriate linguistic input in the classroom, including positive L2 input (or information about those structures which are acceptable in the L2) and negative evidence (or correction of those L1 parameterized principles which are not acceptable in the L2). It is noteworthy to mention that since L2 learners are most likely to rely on their L1 parameter settings, especially at the initial stages of L2 acquisition, it is the task of the L2 teachers to identify those L1 parameter settings whose values need to be reset on the basis of their L2 counterparts. Then, the L2 learners' attention should be drawn to such differences between L1 and L2 parameter settings through exposure to positive L2 input in the form of explicit grammar teaching. However, to trigger parameter resetting, L2 teachers should also provide the L2 learners with negative evidence so that the intervening effect of the L1

parameter settings could also be ruled out.

In short, based on the findings of the study, UG is actually available in L2 acquisition. Accordingly, the variable success of L2 learners can only be attributed to the different types of the L2 input to which learners are exposed by teachers or textbooks in a variety of teaching situations. Therefore, the level of ultimate attainment in L2 acquisition is actually based on various types of positive and negative L2 input to which the L2 learners are exposed by the L2 teachers and in the L2 teaching materials taught in the L2 classroom.

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THE AUTHOR

Born in 1967 in Tehran, she is a Ph.D holder in TEFL from Allameh Tabatabai University. Besides working as a faculty member at K.N. Toosi University of Technology, she is a guest lecturer at Amir Kabir University of Technology and College of International Relations affiliated to the Ministry of Foreign Affairs.

REFERENCES

Birdsong, D. (1992). Ultimate attainment in second language acquisition. *Language, 68*, 706-755.

Bley-Vroman, R. (1990). The logical problem of foreign language learning. *Linguistic Analysis, 20*, 3-49.

Baker, C. L., & McCarthy, D. (1981). *The logical problem of language acquisition.* Cambridge: MIT Press.

Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge: MIT Press.

Chomsky, N. (1981). *Lectures on government and binding*. Foris: Dordrecht.

Clahsen, H., & Muysken, P. (1986). The availability of universal grammar to adult and child learners: A study of the acquisition of German word order. *Second Language Research, 2*, 92-119.

Cook, V. (1985). Chomsky's universal grammar and second language learning. *Applied Linguistics, 6*(l), 2-18.

Cook, V. (1988). *Chomsky's universal grammar: An introduction.* Oxford: Basil Blackwell Ltd.

Coppieters, R. (1987). Competence differences between native and near-native speakers. *Language, 63*(3), 544-573.

Golfam, A. (1998). *Towsif-e ?erja'i dar zaban-e Farsi, (The description of anaphoric relations in Persian).* Unpublished Doctoral Dissertation. Tehran: Tehran Univ.

Gregg, K. R. (1996). The logical and developmental problems of second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), Handbook *of second language acquisition* (pp. 49-81). New York: Academic Press.

Hawkins, R., & Yeut-Hung Chan, C. (1997). The partial availability of universal grammar in second language acquisition: The 'failed functional features hypothesis'. *Second Language Research, 13*(3), 187-226.

Hornstein, N., & Lightfoot, D. (Eds.). (1981). *Explanation in linguistics: The logical problem of language acquisition.* London: Longman, 1981.

Lenneberg, E. (1967). *Biological foundations of language.* New York: John Wiley and Sons.

Miremadi, S. A. (1996). Nazariye-ye marja gozini, yek maghole-ye farsi va bayan-e yek mo§kel (The binding theory, a Persian case and the expression of a problem) In M. Dabir-Moghaddam & Y. ModarTesi (Eds.), *Proceedings of the third linguistic* conference (pp. 105-140).

Penfield, W., & Roberts, L. (1959). *Speech and brain mechanisms.* Princeton, NJ: Princeton Univ. Press.

Pinker, S. (1984). *Language learnability and language development.* Cambridge, MA: Harvard Univ. Press.

Pinker, S. (1994). *The language instinct.* New York: William Morrow.

Rahimi, K. (2000). *Reciprocal constructions in Persian*. Tehran: Allameh Tabatabai

University, Unpublished MA Thesis.

Schachter, J. (1989). Testing a proposed universal. In S. Gass & J. Schachter (Eds.), *Linguistic perspectives on second language acquisition.* Cambridge, UK: Cambridge Univ. Press.

Sorace, A. (1993). Incomplete vs. divergent representations of unaccusability in non-native grammars of Italian. *Second Language Research, 9*, 22-48.

Thomas, K. (1991). Universal grammar and the interpretation of reflexives in a second language. *Language, 67*, 211-239.

Wexler, K., & Manzini, R. (1987). Parameters andleamabilityin binding theory. In T. Roeper & K. Williams (Eds.)*, Parameter setting* (pp. 41-76). Dordrecht: Reidel.

White, L. (1989). *Universal grammar and second language acquisition.* Amsterdam: John Benjamins.

White, L. (1996). Universal grammar and second language acquisition: Current trends and new directions. In W. C. Ritchie & K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 85-120). New York: Academic Press.

White, L. (2003)*. Second language acquisition and universal grammar.* Cambridge University Press.

White, L., & Genesee, F. (1996). How native is near-native? The issue of ultimate attainment in adult second language acquisition. *Second Language Research, 12*(3), 233-265.