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Initial Acquisition of English Inflections by Persian Learners of English as a Foreign Language[*]

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Abstract:

This paper is a cross-sectional study of the acquisition of English inflections using retelling and interview tasks. For this purpose 99 subjects were selected. The research was focused on beginners; however, mid and higher level learners were tested to check the developmental stages of English inflections. It also compares and contrasts the structure of Persian and English and finds out whether Universal Grammar (UG) could account for the acquisition of English inflections. The analysis of data indicated that UG could account for the acquisition of English inflections by Persian learners of English.

Key Words: *Inflectional structure; Inflectional projection (pronouns); Tense projection (tense markers); Complementizers (Wh-questions).*

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1. Background

Early studies on L2 acquisition in the 1950s and 1960s were mainly based on the assumptions of the Contrastive Analysis (CA) hypothesis according to which difficulties that L2 learners face are related to differences between the L1 and L2. It was assumed that by comparing the linguistic systems of the learner's L1 and L2, researchers and teachers would be able to predict the areas of difficulty in L2 acquisition and this would ultimately lead to more effective language teaching methodology. In his classic book *Teaching and Learning English as a Foreign Language*, Fries (1945) argues that the L2 learner builds up a set of habits for production and comprehension of a second language. Fries' primary concern was to design teaching materials which would allow the L2 learner to develop automatic and unconscious habits for the sound and structural systems of the target language. Following Fries' ideas, Lado (1957) hypothesised that the learner's errors could be predicted on the basis of comparing his/her L1 to the target language. In his view, the structures[i] which are similar in both languages will be easy to learn, but the ones which are different will cause difficulty, because when transferred they will deviate from the target forms and will have to be reanalysed. Thus, the basic idea is that the difficulties that L2 learners have can be determined through a contrastive analysis of the two languages involved.

The main thrust of the Contrastive Analysis model is rooted in the dominant psychological and linguistic frameworks of the time, namely, Behaviourism and Structuralism. Behaviourist theories are essentially based on observable behaviour, and in language learning the focus is placed primarily on the role of the environment.

From a theoretical perspective, the association of Contrastive Analysis with behaviourist learning theory ultimately led to its collapse. In a long review of Skinner's *Verbal Behavior*, Chomsky (1959) criticised behaviourist ideas on language learning. Emphasising the fact that language is unique to humans, he argued that human behaviour cannot be explained by animal behaviour. Chomsky's main objection to Skinner's position centered on the notion of syntactic productivity, which had played no role in the behaviorist model. For him, the essence of knowing a language is acquiring knowledge that allows a speaker to produce and understand utterances that s/he has never heard or produced before. As we will discuss in Chapter 3, the crucial assumption is that linguistic knowledge is so abstract that it is not possible for the child to acquire language only from experience. For Chomsky, certain aspects of language do not have to be learned. They are provided by an innate linguistic component, known as Universal Grammar (UG). The issue of what it is that enables young children to acquire language has become a major research question since the emergence of these ideas formulated within the generative framework.

The fact that similar errors were found in the speech of L2 learners regardless of their L1 background led some researchers to hypothesise that L1 and L2 were similar processes (e.g. Dulay and Burt 1972, 1973, 1974). For them, such errors were simply developmental errors found both in L1 and L2 acquisition, and hence L2 acquisition is as creative as L1 acquisition. This approach, known as the Creative Construction or L1=L2 hypothesis, will be reviewed in the next section.

2. Developmental Stages of English Morphemes

In Brown's study, the acquisition of the 14 morphemes was observed over time and determined when they were acquired in terms of the mean length of utterance (MLU), but in contrast, there is not a similar metric comparable to MLU in the L2 morpheme order studies. She also raises the question of whether or not the morpheme rankings found using an elicitation technique in the Dulay & Burt studies look like the order of morphemes obtained from spontaneously collected L2 data. She finds that her spontaneous data do not correlate with the order of the morphemes found in Dulay & Burt's work, but with the orders found in Bailey, Madden & Krashen (1974)[ii] and Larsen-Freeman study[iii] (1976). Rosansky (1976) also notes that the 1973 Sacramento sample shows an order which correlates with the 1974 Spanish-speaking sample but not with the 1974 Chinese sample in the same study. This casts doubts on the results of Dulay & Burt's study because Dulay & Burt argue that the data from the Spanish and Chinese learners are highly correlated and this is taken as evidence that native language of the learners is not important.

For Gass & Selinker (1994), including only obligatory contexts for *-ing* in the counting procedure will skew the results, as it will not reveal the whole picture of the learner's use of a form, namely, the incorrect use of *-ing*.

One should also note the diversity of the morphemes involved in these studies. Under current linguistic theory the morphemes investigated by Dulay and Burt are associated with different functional heads: plural morpheme-*s* and possessive *'s* are under DP, regular past *-ed*, irregular past and 3sg *-s* are under IP. In Dulay & Burt's studies, "these grammatical morphemes are viewed as discrete

lexical items which are assumed to be used one after another, rather than as part of grammatical structures and systems" (Cook, 1993: 31).

Finally, when one considers the morpheme order studies in terms of the assumptions of current linguistic theory, the difficulty we are faced with is the implausibility of the view that any linguistic theory, for example, UG, informs us about the acquisition of these morphemes, which are entirely language-particular. In other words, under current linguistic assumptions it is not clear why UG would have to explain the acquisition/accuracy order of language-specific morphemes. As we have seen, no attempt was made to explain such an order on a theoretical basis. Perhaps this was partly due to the drastic changes in linguistic theory in the 1960s and 1970s during which there was a great flux in research questions and theoretical assumptions (see Lightbown & White for reviews of some of these changes).

2.1 Second Language Acquisition

As we have discussed, within the Principles and Parameters model of language acquisition, it is commonly assumed that L1 acquisition is constrained by the innate language faculty, UG. Such a consensus, however, does not apply to L2 acquisition. One of the major themes in L2 acquisition theory over the last 15 years has been the role of UG in Interlingua. A considerable number of L2 researchers working within the Principles and Parameters framework have raised questions about whether or not the L2 learner is also faced with the same learn ability problem, namely, whether or not L2 learners also acquire a complex grammar which is beyond the input available in the environment. Despite the fact that there are differences between L1 and L2 acquisition with respect to the issue of ultimate attainment, the aim has been to explain knowledge of L2. Many L2 studies in the 1980s examined the issue of L2 acquisition

from a UG perspective (e.g. Bley-Vroman 1989, 1990; Clashen & Muysken 1986, 1989; Felix 1985; Flynn 1987; Hilles 1986; papers in Eubank 1991 and Flynn & O'Neill 1988 and Gass & Schachter 1989, Schwartz 1991, 1992; White 1985, 1989). In this section, I would like to discuss some of these studies dealing with the "availability" or "non-availability" of UG as an operative mechanism in L2 acquisition.

With regard to this question of UG availability, it is important to note that the majority of L2 research in the 1980s concentrated on adult L2 acquisition. Therefore, much of the discussion in this section will be based on studies focused mostly on the development of adult L2 grammar. Studies on child L2 acquisition within the framework of UG will be reviewed throughout the dissertation.

For the purposes of this study, I will discuss two major positions on the issue of whether or not L2 learners have access to UG. One group of researchers argue for the view that adult L2 acquisition falls within the limits of UG, *the UG is available model.* Others argue that UG is not accessible to adult L2 learners; *the UG is not available model.*[4] These theories differ with respect to the issue of L1 influence, as summarized in (1) and (2).

(1) *The UG is not available model:* UG is not accessible to the L2 learner, but aspects of UG utilised in the L1 can be used in L2 acquisition.

(2) *The UG is available model:* UG is accessible to the L2 learner, but initially L1 parameter values are utilised.[5]

Based on the above assumptions three hypotheses are presented below[iv]:

2.2. Three Recent Hypotheses on Language Transfer

2.2.1. The Weak Parametric Transfer (Valueless Features) hypothesis

Eubank (1993/94) takes another look at White's data. While he agrees with White that the absence of data like (3) is an indication of the absence of "long movement", he notes that in addition to SVAdvO, these learners also allow SAdvVO, as in (4).

(3) a. John likes not Mary[v].
b. Likes she John?

(4) a. John helps always Mary.
b. John always helps Mary.

For Eubank, that the L2 learners allow both SAdvVO and SVAdvO is the important fact that needs to be explained. He agrees with White that the SVAdvO order is due to verb raising, i.e. "short movement", but for Eubank, this raising is optional. So the question for Eubank is how verb raising can be optional in the grammar of French-English learners. The answer he provides has to do with the way he views the interaction between morphology and syntax. Eubank follows Pollock's (1989) idea that verb raising is tied to the strength of inflectional features. The values of these inflectional features are in turn dependent on the morphological paradigm of verbs. In French, the morphological paradigm is "richer", and so the value is set to [+strong]. A strong inflectional feature means the verb will raise (e.g. SVAdvO). English, by contrast, has a much more depleted inflectional paradigm for verbs, and so the value is set to weak and the verb does not raise (hence SAdvVO). The fact that both SAdvVO and SVAdvO are produced by the French-English learners shows, according to Eubank, that the initial representation of L2 English does not have the strong inflectional feature of their L1. Eubanks' conclusion is that the strength of inflection does not transfer. He deduces that the reason the

strength of inflection does not transfer is because the morphological paradigm does not transfer. For Eubank, then, the initial value of the inflectional feature is instead "inert". Eubank stipulates that an inert value gives rise to optional verb raising; once the value is set, which depends on acquiring the verbal inflection of the target language, i.e. English, verb raising will cease. What this means, in sum, is that while L1 lexical as well as functional projections and their directionality transfer into the L2 initial state, the values associated with morphological paradigms do not.

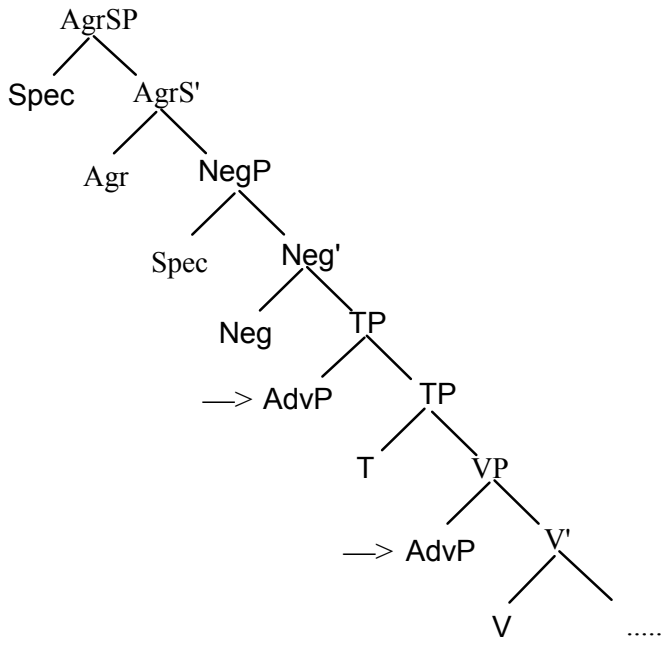
Eubank's analysis, however, has been challenged by Schwartz & Sprouse (1996) who argue that what transfers from the L1 grammar is not partial but absolute. Let us examine how Schwartz & Sprouse analyse these data.

2.2.2. The Full Transfer/Full Access hypothesis

In regard to the SAdvVO / SVAdvO orders in the L2 French-English data, Schwartz & Sprouse (1996) first point out that these data are not necessarily indicative of the L2 initial state, as the learners had already been exposed to English for some time. Recall that at the time the learners produce both SAdvVO and SVAdvO, they do not raise the verb past negation. According to Schwartz & Sprouse (S&S), input in the form of *do*-support provides evidence for lack of verb raising to AgrS in English (Schwartz 1987). Hence, *do*-support causes the delearning of "long movement". However, input in the form of sentence-internal adverbs in English, they argue, is not sufficient for the delearning of "short movement" and so the SVAdvO order persists.

In S&S's analysis, then, the SVAdvO order is consistent with the French analysis, that is, the adverb is base-generated adjoined to the VP, and the verb raises to T, as shown in (5).

(5)



To derive the SAdvVO order, S&S propose that on the basis of SAdvVO input, the learners posit an additional adjunction site for the adverb, namely to TP, as again shown in (5). In this case, although the verb still raises to T, the adverb is now higher.

The important point in S&S's proposal is that the surface SAdvVO pattern in English has an analysis different from the analysis of the SAdvVO order in the French-English L2 data. While English lacks verb raising, for the French-English learners, the verb moves as far as T. According to S&S, initially the learners assumed the grammar of French for English (Full Transfer), however, when the L2

English input showed that the L1 grammar was not adequate, the L2 learners restructured their L2 via UG. This is referred to as Full Access.

2.2.3. The Minimal Trees Hypothesis

The third approach to the issue of L1 influence is Vainikka & Young-Scholten's Minimal Trees model. Here we will need to consider a different set of data. Vainikka & Young-Scholten (1994, 1996a) analyse naturalistic cross-sectional data from adult Korean and Turkish learners of German. They find that the earliest data show an OV order. Some representative examples are given in (6).

(6) a. Teekanne die Ofen setzen. (L1 Turkish)
teapot the oven put.
'(I) put the teapot (on) the oven.'

b. Eine Katze Fisch alle essen. (L1 Korean)
a cat fish entire eat.
'A cat ate the entire fish.' (V&Y-S, 1994: 280)

For Vainikka & Young-Scholten (V&Y-S), in this earliest stage the clause is initially projected only to VP, with verbs remaining in their base-generated position.

This proposal, known as the Minimal Trees hypothesis, is based on the Weak Continuity hypothesis proposed for L1 acquisition according to which children start with lexical projections, while functional projections develop later. On similar grounds, V&Y-S propose a developmental acquisition sequence in which VP precedes IP and IP precedes CP.

The two claims in the Minimal Trees hypothesis, which will become important to our analysis, are as follows:

• Only lexical categories and their linear orientation, which are transferred from the L1, are present at the earliest stage of L2 acquisition.

• Functional projections are acquired through the VP-IP-CP Developmental sequence.

(7) a. John likes not Mary.
b. Likes she John?
(8) a. John helps always Mary.
b. John always helps Mary.

We can summarise the main points of the three hypotheses in the following terms:

• Eubank (1993/94, 1996): Both lexical and functional projections as well as their directionality values transfer into the L2 initial state; however, syntactic properties related to morphological features do not.

• Schwartz & Sprouse (1996): The whole of the L1 grammar characterises the L2 initial state.

• Vainikka & Young-Scholten (1994, 1996a, 1996b): Only lexical projections and their directionality values transfer from the L1.

As we have seen, while the three hypotheses take very different stands, they all hold that previous L1 knowledge plays a role on characterisation of the L2 initial state. The subjects of this study are Persian speaking learners of English and it aims to determine whether the learners' L1 structure plays any roll in acquisition of inflections. Moreover which of these three hypotheses discussed above can account for language transfer.

3. Methodology

This section discusses the subjects and the data. Then the inflectional structures of English and Persian are compared and contrasted. This paper is a cross-sectional study using two tasks: Retelling and interview. The number of subjects participated in this project was 104 students. Twenty six subjects were studying at a junior high school in Yazd and 28 were from Yazd University studying in different fields of study. The remaining 50 were studying at Iran Language Institute (I.L.I). All the subjects studying at the junior high-school and five of the student at the I.L.I were beginners; they have started learning English since last 6 months. Intermediate learners comprised different majors except English students of Yazd University and the mid level learners of I.L.I. Although they had passed English courses at junior high-school and high-school their English level was mid because they had not studies it hard. English students formed the high level subjects since they have been studying English at the university for two years. Furthermore the data showed a correlation between the subjects' level and the type of data. The lower level subjects produced more lexical categories while the higher level learners performed more functional categories than lexical ones.

This paper is a cross-sectional study selected out of 104 students using two tasks: Retelling and interview. 26 subjects were studying at the second grade of a jounior high-school in Yazd

A story Re-telling Task (RT) was used to elicit the L2 learners' spontaneous performance regarding English inflectional markers. I chose the cartoon film Tom and Jerry because it contains a lot of actions and situations to prompt the subjects to use different inflectional markers. Finally the cartoon was switched off after 6 minutes and each subject was asked to explain what has happened. All

responses were (audio) tape-recorded. To make sure that the subjects produce different inflectional markers an oral interview task was carried out. Every two subject were asked to ask each other some questions and they were tape-recorded. As far as I know the study of inflectional markers were studied as a second language rather than as a foreign language.

3.1 Data Collection

The recorded tapes were transcribed. All inflectional markers were coded on a Microsoft word on a computer. To count the number of the markers, I clicked on Menu Edit. The Minimalist Linguistic theory was applied to account for the grammatical and ungrammatical inflectional markers. In this way, the inflectional structures in English and Persian were compared and contrasted. The inflectional markers which were studied in this study included the subject and object clitics and pronouns, tense markers, Complementizer Projection (CP) markers, the use of Wh- and yes/no question markers. In next section the Persian and English inflectional markers are studied.

3.2 Persian and English Inflectional Markers

The most important part of Chomsky's (1993) Minimalist program is morph syntactic features. These features include the morph syntactic features of tense and the subject/object clitics. Based on the Minimalist program lexical categories project their syntactic features initially. Furthermore, the instantiation of tense and clitic pronouns was applied in functional category. Functional projections include merging tense and pronouns. Subject Agreement Projection (AgrS-P) and Object Agreement Projection (AgrO-P) are the check up position for subject and object agreement respectively.

Functional features are determined as strong or weak whether the checking take place before or after Spell-out[vi]. In English AgrS-P takes place before Spell-out because subjects precede verbs. However, AgrO-P happens before Spell-Out since verbs precede objects. A subject precedes a verb, while an object follows it both in simple (e.g. John reads a book every night.) and complex sentences (e.g. You know that John reads a book every night.).

In Persian both clitick subject and object agreements follow the verbs while their subject and object pronouns correspondences precede the verb. we claim the Persian agreements are strong since they need to move before Spell-Out.

(9) Reza har shab ketab mi- khan-ad
Reza every night book imperfective-study-he.
Reza studies a book every night.

(10) Shoma mi-danid Reza har shab ketab mi-khanad
You imperfective-know-you Reza every night book imperfective-study-he
You know Reza studies a book every night.

In Persian verbs are marked with tense and subject and object agreement cliticks:

(11) Did-am-ash
See-did Him-I
I saw him.

In Persian these verb agreements have fix positions since if one replace one marker with for instance with clitick object with subject clitick the sentence will be ill-formed (*didasham).

First according to the Minimalist program the cliticks of Persian subject are discussed. Verbs are inflected completely, i.e. with subject and object cliticks and tense markers (see sentence 11). Then these cliticks need to move to functional categories to check with sbject and object pronouns then verb inflections are strong in Persian. However, verb forms in English are weak since they do not indicate subject and object cliticks, for instance: I (you, she, he, we, they) saw him.

There is only one exception which is the third person present tense "-s" attached to the verb.

Then what is the difference between Persian and English in regard to subject and object pronouns? In Persian verbs show both subject and object cliticks which need to move to their correspondence subject and object pronouns to check agreement before Spell-Out while in English this movement takes place after Spell-Out. The second difference between English and Persian is with regard to tense markers. In English tense forms of finite verbs are checked after Spell-Out, while those of copula verb "be" and main verb "have" are checked before Spell-Out so they are strong. However, all verbs in Persian are strong that is they function like English copula.

With regard to verb movement in English, the assumption is that only auxiliaries *be* and *have* and modal verbs raise before Spell-Out. English main verbs, however, do not move until LF, as the relevant features are assumed to be weak. In English, evidence for the analysis of *have* and *be* undergo overt movement comes from the distribution of negatives, adverbs and quantifiers.

(12) a. They have **not** gone to the store yet.
b. They are **not** leaving today.
c. Mary has **probably** left the country.
d. Mary is **probably** working with a new partner.

(13) a. The children have **all** enjoyed the picnic.
b. The children are **all** buying ice cream.
(14) a.*They want **not** go to the cinema.
b.*Mary saw probably her brother.
c.*The children like **all** ice cream.

The examples in (12-13) show that the negative element *not*, the adverb *probably* and the quantifier *all* are positioned after *have* and *be*. This is something which does not occur with English main verbs, as shown in (14). Under the assumption that *have* and *be* originate within VP and raise past the negative marker, the adverb and the quantifier before Spell-Out, these facts provide support for a head-movement analysis of the auxiliaries in English.

3.3 Results & Discussion

3.3.1. TP Acquisition

The Minimalist program comprises both lexical and functional projects. The verb of a sentence needs a tense marker so it gets marked by tense projection. According to the Minimalist program Inflectional Projection (IP) determines tense and subject/object markers.

In this section, we classify the data into inflected and non-inflected verbs. Inflected verbs indicate that verbs and their complements are moved to IP to be checked; while those of non-inflected ones are not moved then they are not inflected.

(15) a. dog-NP ride-UNINF car -----
b. Father -------- make-UNINF -------a car
c. girl car-MN show-UNINF
d. the son win-UNINF race

(16) a. son-NP -------- sees-SM ---- sees to girl
b. the boy father...boy's father-MN shows-SM his son neigbour
c. the father has-PRES.PRF made it
d. the baby decided-PAST REG –Mising PRO-go to match
e. the father started-PAST REG to-PRO make the

The data in 15a-b are not inflected for tense and subject agreement that the verbs are not moved to IP rather thet remained in VP. They are coded "UNINF" which stands for "uninflection". However, the verbs in 16a-b are inflected and they are coded for tense. The code "SM", PRES PRF or PASTREG stands for Simple Present, Present Perfect and Simple Past Regular respectively. These verbs move to IP to get inflected.

A Chi-sqaur (X^2) test was carried out to determine if the difference within and between low, mid and high groups was significant in uninflected verb form (VP) and inflected verb forms (IP).

Table 1: Group Comparison for VP and IP Forms

Level * VP vs.TP Crosstabulation

			VP.TP		
			VP	TP	Total
Level	LOW	Count	75	21	96
		Expected Count	49.5	46.5	96.0
		% within Level	78.1%	21.9%	100.0%
		% within VP.TP	22.2%	6.6%	14.7%
		% of Total	11.5%	3.2%	14.7%
	MID	Count	111	74	185
		Expected Count	95.5	89.5	185.0
		% within Level	60.0%	40.0%	100.0%
		% within VP.TP	32.8%	23.3%	28.2%
		% of Total	16.9%	11.3%	28.2%
	HIGH	Count	152	222	374
		Expected Count	193.0	181.0	374.0
		% within Level	40.6%	59.4%	100.0%
		% within VP.TP	45.0%	70.0%	57.1%
		% of Total	23.2%	33.9%	57.1%
Total		Count	338	317	655
		Expected Count	338.0	317.0	655.0
		% within Level	51.6%	48.4%	100.0%
		% within VP.TP	100.0%	100.0%	100.0%
		% of Total	51.6%	48.4%	100.0%

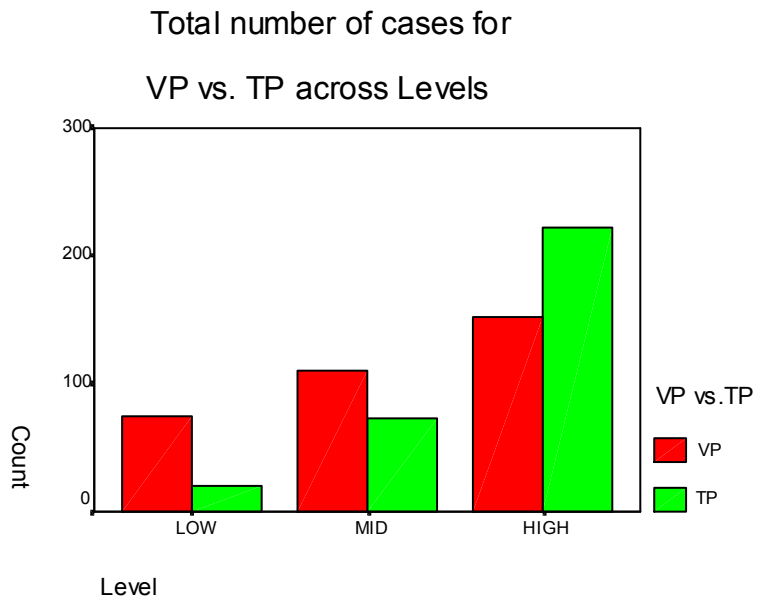


Figure 1

Figure 1 Shows that both the low and mid groups produced more VP structure than IP one. However, the high group also produced VP structure.

3.3.3. IP Acquisition

The difference between modals and finite verbs is that they are inflected differently. For instance, modals do not take the "-s" third person singular while finite verbs do (e.g. *John mays come.). Verbs "be" and "have" are also inflected. In Persian there is no difference between modal and finite verbs. They are all inflected.

In this section, the acquisition of modals and "be" is discussed. The verb "have" was discussed above. Some

examples of the acquisition of modals which are coded "MOD" are presented below:

(17) a. I can ----- I can-MOD- make machine
b. So she couldn't-MOD NEG take part in the ---- take part in the race
c. He can-MOD win they can win in the match
d. He can-MOD say some thing that really people like to-PRO hear

The results indicated that the high level group (%54.4) used more frequent modals than the low (%14) and mid (%31.6) groups. However, the data showed that the low level group outnumbered (%35.3) than the mid (%34.2) and the high (%30.5) groups.

3.3.4. CP Acquisition

3.3.4.1 Acquisition of Yes/No questions

The low level learners produced both inverted coded YES/NO INV and non-inverted applying just raising into national pattern coded YES/NOINTO. Examples18a-b recorded belong to the low level group while those of 19a-b provided by the higher level groups.

(18) a. you like football-YES/NO INTO?
b. Boy sick is-YES/NO INTO?

(19) a. Are you a boy-YES/NO INV ?
b. Have you brother-YES/NO INV?

The table and figure below show the results of the data. The Chi-square test indicated that the difference between the YES/NO INTO and YES/NO INV structures between the groups was not significant (P= 0.951).

Table 2: Group Comparison for YES/NO INTO and YES/NO INV Structures

Level * VP Crosstabulation

			YES/NO QUESTIONS		
			YES/NO INTO	YES/NO INV	Total
Level	LOW	Count	3	6	9
		Expected Count	2.8	6.2	9.0
		% within Level	33.3%	66.7%	100.0%
		% within VP	50.0%	46.2%	47.4%
		% of Total	15.8%	31.6%	47.4%
	MID	Count	1	3	4
		Expected Count	1.3	2.7	4.0
		% within Level	25.0%	75.0%	100.0%
		% within VP	16.7%	23.1%	21.1%
		% of Total	5.3%	15.8%	21.1%
	HIGH	Count	2	4	6
		Expected Count	1.9	4.1	6.0
		% within Level	33.3%	66.7%	100.0%
		% within VP	33.3%	30.8%	31.6%
		% of Total	10.5%	21.1%	31.6%
Total		Count	6	13	19
		Expected Count	6.0	13.0	19.0
		% within Level	31.6%	68.4%	100.0%
		% within VP	100.0%	100.0%	100.0%
		% of Total	31.6%	68.4%	100.0%

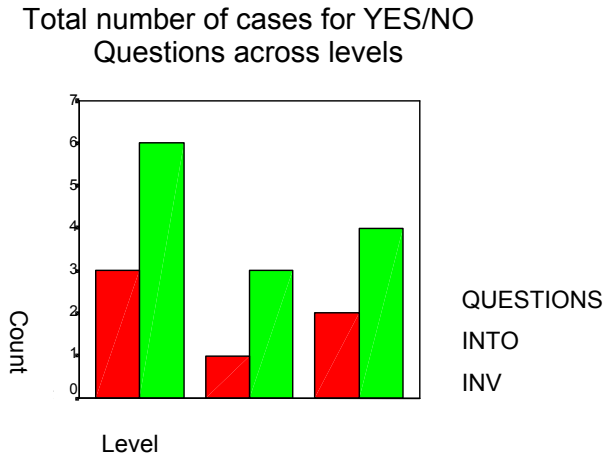


Figure 2

3.3.4.2. Wh- questions acquisition

The Chi-square results indicate that the low level learners produced more "Wh-" non-inverted subject and auxiliary (%61.5) than the other groups (%38.5); while the mid and high level groups produced %49.1 and %40 inverted "Wh-" subject and auxiliary respectively. Examples of these two structures are presented below:

(20) a. Which city-WH-UNINV come from
b. WHAT colour -------- colour ----- this is-WH-UNINV
c. How old you-WH-UNINV ?

(21) a. What's this-WH-INV?
b. What colour ------ is chair-WH-INV
c. What's your brother-WH-INV?

The Chi-square proved that the degree of difference between the inverted and non-inverted structures between the groups was completely significant (P= 0.000).

Table 3: Group Comparison for Wh- inverted Vs. Wh- non-inverted Structures

Level * WH Crosstabulation

			WH		
			WH-UNINV	WH-INV	Total
Level	LOW	Count	8	6	14
		Expected Count	2.7	11.3	14.0
		% within Level	57.1%	42.9%	100.0%
		% within WH	61.5%	10.9%	20.6%
		% of Total	11.8%	8.8%	20.6%
	MID	Count	5	27	32
		Expected Count	6.1	25.9	32.0
		% within Level	15.6%	84.4%	100.0%
		% within WH	38.5%	49.1%	47.1%
		% of Total	7.4%	39.7%	47.1%
	HIGH	Count	0	22	22
		Expected Count	4.2	17.8	22.0
		% within Level	.0%	100.0%	100.0%
		% within WH	.0%	40.0%	32.4%
		% of Total	.0%	32.4%	32.4%
Total		Count	13	55	68
		Expected Count	13.0	55.0	68.0
		% within Level	19.1%	80.9%	100.0%
		% within WH	100.0%	100.0%	100.0%
		% of Total	19.1%	80.9%	100.0%

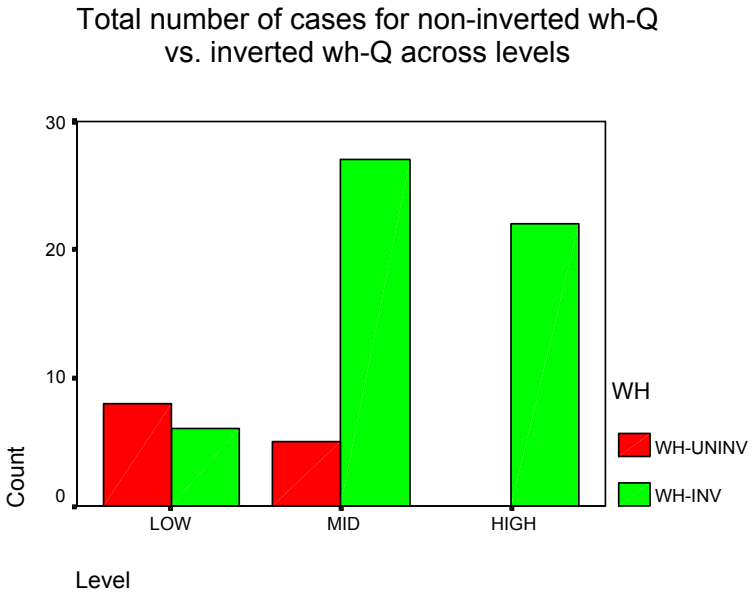


Figure 3

4. Summary of Data Analysis

The data which studied in this study are as follow:

1. The acquisition of tense markers (TP) such "-ed", simple present "-s", "have or has" present perfect were produced by all level group learners; however, these learners also produced some verb forms indicating the lack of TP that is verbs have remained in their initial position, i.e. VP. To be more specific, the low level subjects just provided %6.6 of TP structure on the contrary they produced %78.1 of the total VP structure. The higher level learners just produced %5.4 of the total VP structure. The interesting point was that the low level group produced both VP and TP structures.

2. The acquisition of IP which instantiates the position of modals and copula "be" was investigated. This study indicated that

modals were produced even by the low level learners. An unexpected result was that the low level group produced higher percentage (%35.5) of "be" than the high level subjects (%30.5).

3. In addition to the production of TP and IP structures by the low level learners, they also produced negation structures which show that the learners had access to these functional categories. These negation structures were produced by auxiliaries and modals. The learners had just put the negation marker "not" before a modal while other negation forms followed Standard English equal to Persian negation marker. It shows that all learners regardless of their level never made a mistake arranging the negation marker in the right position. In English the evidence that shows modals and auxiliaries are raised from VP to IP by placing these verbs before the negation marker "not". The application of CP such as yes/no questions was also studied. Some of the structures were Wh- inverted and some Wh- uninvited. As you know the latter structure followed Persian yes/no question structure.

Wh-question structure in English is formed by NP movement. In Persian, however, there is no NP movement and no auxiliary and subject inversion. The data analysis showed that %61.5 of Wh-question sentences produced by the low level subjects followed Persian Wh-question.

5. An Account of Universal Grammar Theories to the Initial Acquisition of English

I discussed the Minimal trees hypothesis proposed by Vainikka and Young –Scholton **(**1994; 1996a; 1996b) that only lexical categories are present at the earliest stage of second acquisition and functional categories such TP and IP develop in succession (see

section 2.2.3). It was mentioned above that even the low level subjects formed both lexical structure, i.e. bare form of verb such as VP and functional structures, i.e. verbs with tense marker like TP and IP (see sentences 15 and 16 above).

We may assume that the Minimal Trees hypothesis could account for the data because the low level subjects produced %78.1 structures without tense or pronoun markers, i.e. VP. It indicates that they did not learn TP or IP structure respectively. These learners, however, formed %21.9 of total verbs with TP and IP markers which would imply they had acquired them. According to the Minimal Trees hypothesis providing that the learners apply an L2 structure above %70 correctly then one can make sure it has been acquired. The present data showed %21.9 of TP and IP structures were produced by the low group learners then they have not learnt these structure yet. However, other structures the copula "be" and modals produced by the low level learners indicated their unconscious knowledge of functional categories TP and IP. These learners performed higher percent (%35.3) of "be" forms than that of mid (34.2) and high (%30.5).

Schwartz and Sprouse (1996) refer to second language acquisition data which are similar to the above date and they prove that even the low level subjects have acquired functional categories such as IP or TP (see section 2.2.2). They discuss that the use of other structure like negation would prove some evidence that they have acquired TP. The negation marker "not" follows the copula "be" to do so the copula "be" makes sequential VP-Neg Projection-IP movement (see tree diagram 5). It was mentioned above nearly negation marker "not" except one case followed "be". It shows that the low level learners had acquired TP. If they had transferred negation from their L1, they would have put "not" before "be".

Eubank (1993/94, 1996) also hypothesizes that although both lexical and functional categories transfer, the 'strength' values of morphological features under functional heads do not transfer. Eubank's idea is that since overt inflectional morphology does not transfer, neither do the Parametric values of features that are determined by this morphology. It was mentioned that Persian clitick subjects are stronger than those of English. In English, there is just one subject clitick, i.e. "-s" third person present tense which marks a finite verb explicitly; however, in Persian there is a clitick subject marker for each person. It seems that the low level learners moved verbs from VP to IP because of Persian subject clitick transfer to English. This hypothesis denies functional categories transfer that is the 'strength' values of morphological features transfer from Persian into English.

The data in this study support Full Access/Full Transfer of Schwartz and Sprouse (1996). They claim that the beginners transfer lexical and functional categories from L1 to L2. Since subject cliticks and tense markers are stronger than those of English then low level learners raise verbs from VP to IP and TP.

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