Acquisition Of English Time Markers By Persian Speaking Learners Of English

Moeen, A. A.¹ and A. A. Jabbari²

Affiliation:
¹Lecturer of Applied Linguistics, Azad Islamic University, Mayboad Branch, Iran
²Associate professor of Applied Linguistics, Faculty of Foreign Languages, Yazd University, Yazd, Iran

ABSTRACT:
This research project is a cross-sectional study of the acquisition of tense and aspect by 210 Persian learners of English as the experimental group and 15 advanced students as the control group. This study specifically investigates the hypothesis of Primacy of Aspect (POA) that claims there is: (1) a strong association of past/perfective morpheme with achievement and accomplishment verbs, (2) a strong association of progressive morpheme with activity verbs, (3) no overextension of progressive inflection to stative verbs, and (4) strong association of the present morpheme ‘-s’ with stative verbs. The study also argues for the semantic implications of the present data for the Distributional Bias Hypothesis (Andersen, 1991), that the distinction of verb type in the input is skewed so as to create the acquisitional pattern found in studies of the POA in language acquisition, and for the Language Bioprogram (Bickerton, 1981), that aspectual values are the knowledge a child is born with as the sources of the POA in SLA. The study also examines the syntactic implications of the data for the ‘initial state’ hypotheses in SLA: The Minimal Trees Hypothesis (Vainikka & Young-Scholten, 1994, 1996a, 1996b), The Full Transfer/Full Access hypothesis (Schwartz & Sprouse, 1996) and The Weak Parametric Transfer (Valueless Features) Hypothesis (Eubank, 1993/94, 1996). The results supported the findings of the POA and the Minimal Trees Hypothesis.

INTRODUCTION
Most studies on the second language acquisition of tense and aspect are of English and these data generally support for the POA, that (a) past morphology is associated with achievement or accomplishment verbs (Cushing 1987; Economides, 1985; Flashner, 1982; Robison, 1990 & 1995, Rothstein, 1985; Shirai & McGhee, 1988; Taylor, 1987) and (b) -ing is strongly associated with activity verbs (Cushing 1987; Economides 1985; Kumpf 1982; Rothstein 1985; Taylor 1987). For instance, Robison (1995) analysed English interviews with 26 Puerto Rican university students grouped into four proficiency levels and found an association of verbal inflections with lexical aspect in lower-level groups, while verbal inflections associated with tense in higher-level groups. Some examples of the lower level subjects are provided below:

We talking a while ..... they come to our ..... . [Target tense ‘past’, verb type ‘activity’]
A baseball player ..... playing ..... ball. [Target tense ‘present’, verb type ‘activity’]
I have ..... lives um ..... fifteen years in Yabucoa. [Target tense ‘present perfect’, verb type ‘stative’]
He began ..... October nine. [target tense ‘future’, verb type ‘achievement’]

(ROBISON 1995: 357-361)

SEMANTIC VIEW OF INHERENT ASPECT
The POA states that verbal inflections that occur with certain types of verbs or predicates encode the properties of verbal aspect with what they affiliate. In other words, the association of morphemes with
verbal aspect indicates that the morphemes display the inherent aspectual properties of verbs or predicates rather than the properties of tense. What exactly is inherent aspect? The idea is that every predicate has an internal temporal property (Comrie, 1976; McClure, 1995; Vendler, 1976; Verkuyl, 1993). For example, in the propositions 'John ran' and 'John arrived', the inherent temporal property of the verbs 'ran' and 'arrived' are not the same. The former denotes a process, while the latter denotes an instantaneous change of state (i.e. punctual). Inherent aspect consists of telic and atelic (or non-telic) aspects. Telic events indicate an action with a final goal. Telic predicates are further subdivided into two groups: achievement (e.g. recognise his mother) and accomplishment (e.g. make a cake) aspects. For accomplishment aspect both time 1 as onset time and time 2 as final conclusion are part of the universal entailment of the aspect, while for achievement aspect, only time 2 is part of the essential universal entailment of the aspect. Non-telic predicates are also subdivided into two groups: activity and stative aspects. Activity aspect only involves the onset time (time 1) without final conclusion (time 2) (e.g. run). Stative aspect has neither time 1 nor time 2 (e.g. know). All predicates (stative, activity, achievement, and accomplishment) are constrained by three universal aspectual values: [punctual], [telic], and [dynamic].

### Table 1. Semantic Features for the Four Categories of Inherent Lexical Aspect (Andersen 1991)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Stative</th>
<th>Activity</th>
<th>Achievement</th>
<th>Accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punctual</td>
<td>_</td>
<td>_</td>
<td>+</td>
<td>_</td>
</tr>
<tr>
<td>Telic</td>
<td>_</td>
<td>_</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Dynamic</td>
<td>_</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

**Semantic View of Inherent Aspect in Persian**

In Persian, most verbs are expressed as compound verbs. All simple and compound verbs that end in 'budan' 'to be' (e.g. xoshahlbudan 'to be happy' bimarbudan 'to be ill') and ‘dashtan’ 'to have', e.g. eteghaddashtan 'to believe', dust dashtan 'to like') are stative verbs. Stative verbs without 'budan' 'to be' and 'dashtan' 'to have' are expressed by the imperfective prefix mi- as in (1a). The prefix mi- does not just mark stative verbs, other aspectual non-stative verbs can be expressed by the imperfective morpheme mi-. However, in Persian only stative verbs with the prefix mi- are incompatible with the progressive auxiliary 'dashtan' 'to have' (e.g. *darammidanam *'I’m knowing'), whereas non-stative verbs with the imperfective mi- are compatible with the progressive auxiliary as in (2a). Furthermore, the prefix mi- with stative verbs is an obligatory morpheme, whereas the morpheme mi- with non-stative verbs is an optional morpheme. In other words, non-stative verbs with this morpheme are in progressive form and without this morpheme are perfective (cf. 2a-b), while statives with the state prefix mi- are imperfective (but not progressive form) and without this prefix are impossible (cf. 1a-b):

1. a. (man) a’rabi mi- dan- am
   I Arabic impf know-1sg
   'I know Arabic'

   b. *(man) arabidan-am
   I Arabic know-1sg
   'I know Arabic'

2. a. (man) dasht-am mi david-am
   I had-1sg impf ran-1sg
   'I was running'

   b. (man) david-am (non-stative)
   I ran-1sg
   'I ran'

Moreover, the prefix stative verb mi- represents a Persian inherent aspectual marker, while the morpheme non-stative verb mi- represents either a grammatical aspectual marker or a tense marker such as in the sentences in 3 and 4 below.
Sentences 3a-b with stative verbs use the prefix mi- with both present and past tenses while sentences 4a-b with non-stative verbs use the morpheme mi- with present tense but without the prefix with past tense. While Persian obligatorily employs the stative imperfective mi- to distinguish the contrast of stative (5)/non-stative (6a) aspect, English only employs perfective aspect to refer to both stative (5) and non-stative (6a) aspect.

(5) English: He knew Arabic. vs. Persian: (u) arabi mi-danes-t
She/he Arabic Impf-knew-3 SG

To sum up, the prefix mi- with non-stative verbs is either a tense or grammatical aspect marker, whereas the prefix mi- with statives is an inherent aspectual marker.

The question that arises is why the lower level learners would transfer their L1 imperfective form into the target language, while the higher level learners would not? The reason would be that lower level learners have not received much input yet and would rely on their L1-language. However, the transfer of aspectual markers has to be compatible with the universal aspectual entailment of stative aspect if POA is involved. In English, the attachment of the imperfective marker ‘-ing’ gives progressive interpretation to verbs, thus the English stative verbs are not compatible with the imperfective marker ‘-ing’. However, in Persian the use of the imperfective stative marker mi- does not give progressive interpretation to stative verbs. Therefore, the use of the imperfective marker ‘-ing’ with stative verbs in English violates a universal entailment of stative verbs. The expectation is actually that even the lower level learners will not use the English imperfective marker with stative verbs. Therefore, it could be quite interesting to mention that L1 Persian-L2 English provides an interesting test for the POA: if the POA is correct, we would predict that there will be no influence of L1 inherent aspect markers on the L2. If, however, there is L1 influence in the early stages as predicted by initial state hypotheses like ‘Full Transfer/Full Access’ there is every reason to predict that Persian speakers will map ‘-ing’ onto stative verbs, as a stative marker, just as in Persian. Thus, the first question and research hypothesis is as follows:

**RESEARCH HYPOTHESIS 1**

Persian learners of English will not transfer the imperfective prefix with Persian stative verbs using the English counter-part imperfective suffix -ing even at lower levels of English proficiency, because the English imperfective -ing is not compatible with the universal entailment of stative verbs.

**ACTIVITIES IN PERSIAN**

Activities are homogenous like statives, but different in that they have a structure composed of successive stages. An activity or a process has no goal or natural final point. Since activity verbs or predicates have time 1 (onset time) without time 2 (end-point), they are compatible with the process adverbial ‘for’, while they are not compatible with the ‘end-point’ adverbial ‘in’:

(6) a. (man) barayeyeksaatshenakard-am.
   I FOR AN HOUR SWIM DID-1SG
   ‘I SWAM FOR AN HOUR.’
ACCOMPLISHMENT AND ACHIEVEMENT ASPECTS IN PERSIAN

In Persian the form of the direct object determines whether a predicate is an accomplishment or activity aspect (Ghomeshi & Massam, 1994). The predicates with the direct object markers ‘-ra’, ‘-l’, or ‘l-ra’ indicate that the direct object is definite, indefinite, or indefinite but specific and referential, respectively, whereas a direct object without these markers shows that the NP is non-referential and forms a unit with the verb. In Persian, direct objects with NP markers form accomplishment (7a) or achievement, while the direct objects of accomplishment verbs without NP markers form activity aspect (7b). In Persian all accomplishments can be shifted into activities (7).

(7) a. English: I wrote the book. vs. Persian: (man) ketab-raneve'sht-am.
    I book-def wrote:pf-1 SG

b. English: *I was book writing. vs. Persian: (man) ke'tabnevesht-am
    I book wrote-I SG

English employs definite or indefinite articles with direct objects, but there are few compounds in English for which NP + V forms a unit, e.g. 'food shopping'.

The distinction between the NPs with and without the direct object markers ‘-RA’, ‘-L’, OR ‘L-RA’ is semantically and syntactically realized. From the semantic point of view, The NPs without the direct object markers do not bound or measure out the action described by the accomplishment verb, whereas the NPs with the direct object markers measure out the action described by the verb.

Adverbial modifiers are used as diagnostic tests (proposed by Vendler, 1967 and Dowty, 1979) to distinguish among the above NPs. Durative or atelic adverbials (e.g. for an hour) are compatible with predicates which do not have an end-point (i.e. activities and statives) whereas telic adverbials (e.g. in an hour) are compatible with predicates which do have an end-point (or accomplishment and achievement).

In Persian, atelic adverbials with accomplishment verbs are acceptable only with the NPs direct object markers while telic adverbials with telic events including both accomplishment and achievement verbs make sense only with the NPs direct object markers. The direct object NP of the accomplishment predicate in the sentences in 4 appears with the definite marker ‘-ra’; therefore, it can measure out the verb and it is compatible with telic adverbial as in (7a), whereas it is not compatible with an atelic adverbials as in sentence (7b). In the sentences in 5, however, the NP appears without any noun marker (i.e. the fourth type of NP), therefore it is compatible with an atelic adverbial (sentence 8b) and it is incompatible with a telic adverbial (sentence 8a).

(8) a. (man) daryekmahketab-raneve'sht-am
    I in a month book-def wrote-1sg 'I wrote the book in a month'

b. *(man) barayeyekmahketab-raneve'sht-am
    I for a month book-def wrote-1sg 'I wrote the book for a month'

(9) a. *(man) daryekmahketa'bnevesht -am
    I in a month book wrote -1sg 'I was book writing in a month'

b. (man) barayeyekmahketa'bnevesht -am
    I for a month book wrote -1sg 'I was book writing for a month'

However when we look at transitive achievements without the direct object markers‘-ra’, ‘-l’, and ‘l-ra’, we find they do not shift into atelic activity unlike accomplishments (Jabbari 1998). Achievements without a direct object marker as in (10b) are incompatible with atelic adverbials, but are still compatible with telic adverbial as in (10a):
The distinction between the fourth type and the first three types of Persian NPs is also syntactically realised. In the fourth type of NP (accomplishments without NP markers), the NP is not aspectually a measurer and forms a unit with accomplishment verbs. In other words, the transitive accomplishment demotes or decreases to an intransitive verb. The NP which incorporates with the accomplishment verb to form a unit is crucially an No.+ Vo following Sproat (1985) that referentially is a matter of phrases rather than heads; i.e. we can propose that No is not referential. In other words, No is a sister to Vo under V’. Therefore, such NPs form transitive telic verbs consisting of both accomplishment and achievement verbs (Ghomeshi and Massam 1994):

\[
\begin{array}{c|c}
\text{Accomplishment aspect} & \text{Activity Aspect} \\
\hline
V' & V' \\
\text{NP} & \text{Vo} \\
\text{No} & \text{Vo} \\
\end{array}
\]

(ADAPTED FROM GHOMESHI AND MASSAM 1994: 190)

Through the absence of direct object markers, accomplishments in Persian can be switched to activity, whereas achievements cannot. While there are a few compounds in English for which NP + V forms a unit (e.g. food shopping), in Persian shifting accomplishments into atelic events is productive. This allows us to formulate a second research hypothesis:

**RESEARCH HYPOTHESIS 2**

Persian learners of English will shift accomplishments to activities at lower levels. In this case, they will associate accomplishments with the aspect marking(s) that they affiliate activities with. Higher level learners will not shift accomplishments to activities.

The question which arises is whether the above hypothesis poses any potential problem for the POA. Suppose the data show that the lower level learners would shift accomplishments into activities. In this case, the learners still follow universal entailment of aspect. The data would also have some important implications for initial state hypotheses like ‘Minimal Trees Hypothesis’ that the lower level Persian speakers do not transfer the functional categories of direct object markers but they would transfer the lexical categories of accomplishments into activities.

**SEMANTIC EVIDENCE OF POA HYPOTHESIS: RESEARCH HYPOTHESES**

An important part of this study was to test the Primacy of Aspect (POA) Hypothesis which claims verbal morphemes initially mark lexical aspect among lower-level learners and then came to mark tense for higher-level learners (Robison, 1995). On the basis of this four additional hypotheses were formulated:

**RESEARCH HYPOTHESIS 3a**

Lower level learners will use the present form to mark [-dynamic], statives, with tense distinction being neglected, while higher level learners will mark statives with correct tense forms.
RESEARCH HYPOTHESIS 3b
Lower level learners will mark [+dynamic and -telic], activities, with the progressive form, with tense distinction being neglected, while higher levels learners will apply correct target tense regardless of the type of learners aspect.

RESEARCH HYPOTHESIS 3c
Lower level learners will mark [+punctual and +telic], achievements, with PAST form ignoring correct target tense form whereas higher level learners will mark achievements with correct target tense forms.

RESEARCH 3d
Lower level learners will mark [-punctual and +telic], accomplishments, with past form regardless of the type of target tense while higher level learners will apply correct target tense forms.

So far, I have discussed the semantic interpretation of inherent aspect and its research hypotheses. In the next section, I will discuss the syntactic view of the semantics of inherent aspect along with its research hypotheses.

A SYNTACTIC VIEW OF THE SEMANTICS OF INHERENT ASPECT INTERFACE BETWEEN LEXICON AND SYNTAX
The main question regarding the syntax-lexical semantic interface is whether there exists an association between lexical properties of predicates and the syntactic structure in which they can appear. Why should such a correlation be proposed to exist? One good reason is that a strong correlation between meaning and structure might explain the rapidity of language acquisition; language learners need not learn syntactic structures of verbs on an item-by-item basis, but rather, they make generalisations on the basis of regular correlation, while the syntax-lexicon interface can be described according to several different approaches.

SYNTACTIC RAMIFICATIONS OF POA HYPOTHESIS: RESEARCH HYPOTHESES
POA suggests that there may be some evidence for the IP system at least in terms of subject-verb agreement of the present tense ‘-s’ and the tense marker PAST at the early stages of language acquisition. For example, Shirai (1991) investigated the acquisition of verbal morphology by three American children whose ages ranged from 1;6 to 4;10 acquiring English as an L1. He reported that while the children use verbal morphemes to mark inherent aspect (e.g. the biased association of achievement with past form ‘-ed’), their use of infinitives was frequently observed. I suggest that these associations of verbal forms which co-occur with the use of the infinitive form be semantically in accordance with the universal entailment of aspect and syntactically in accordance with the aspectual projections, rather than evidence of IP. These verbal forms involve projections lower than the IP system, which are checked by the aspectual projections AspEM and AspOR. To support this claim, any study would also have to show that functional verbal elements including modals, negative sentences with auxiliaries, auxiliaries with correct target tense are more frequent relative to the biased association of verbal morphemes with inherent aspect and infinitives in higher level groups than the lower level groups and vice versa. This allows us to generate the following two hypotheses:

RESEARCH HYPOTHESIS 4a
Lower level learners will use fewer IP-level verbal forms (in proportion to all verbal forms of aspectual projections) than higher level learners.

RESEARCH HYPOTHESIS 4b
Lower level learners will use more verbal forms of aspectual projections (in proportion to all IP-level verbal forms) than higher level learners.

So far I have discussed the semantic and syntactic view of inherent aspect along with their ramifications. In the next section, I will compare inherent aspect with tense because these two phenomena are under investigation in the present study.

METHODOLOGY
PARTICIPANTS
A cross-sectional study using three tasks was conducted to test 210 Persian learners of English at the time of testing at three levels of proficiency from beginning to lower Advanced Learners of English
All informants were enrolled at Iranian public schools and Yazd University as well. Since part of this study aims to check the informants’ interlanguage of English target tenses such as present, present perfect, past, past perfect, future, and future perfect tenses against English native speakers, a control group of 15 ADV.L.

In order to test the POA hypothesis, the learners’ English proficiency levels had to be measured to provide an independent means of categorizing learners as lower level vs. higher level. The Edinburgh Reading English Test (ERET) was chosen to measure the ESL subjects’ proficiency in English. It is constructed to measure the children’s general progress in English. The test is divided into four sub-tests of vocabulary (20 items), syntax (30 items), sequences (20 items) and reading comprehension (21 items), totaling 91 items. The subjects’ scores were between 23 to 89 out of total score 91. The 210 subjects were divided into three groups with 70 subjects for each group: low, mid, and high-level groups. The low, mid, and high-level learners scored about one-third, two-thirds, and higher than two-thirds of the total score, respectively.

**GRAMMATICALITY JUDGEMENT TASK**

The use of Grammaticality Judgement Task (GJT) to elicit the subjects’ intuitions regarding tense/aspect enables the investigator to balance all aspectual categories (i.e., stative, activity, achievement, and accomplishment) and target tenses (i.e., present, present perfect, past, past perfect, future, and future perfect tenses).

122 sentences consisting of 112 experimental sentences and 10 practice sentences were constructed for the GJT. Of the 112 experimental sentences, 92 were targets and 20 were distractors designed to deflect the subjects’ attention from the aim of the target sentences. There were three sets of target sentences, that is, three types of lexicalization of aspectual verbs (group I, group II, and group III), which were randomly presented to the subjects (e.g., see sentences 13-16 below). A 5-point scale technique was applied, requiring learners to respond in terms of very bad, bad, I don’t know, good, and very good.

**GAP-FILLING TASK**

The native English speakers and the second language learners were given 72 test items consisting of three tokens for each verb type: stative, activity, achievement and accomplishment, with the six target tenses: present, present perfect, past, past perfect, future and future perfect (i.e. 3 x 4 x 6 = 72). There were three sets of target sentences, that is, three types of lexicalization of aspectual verbs (group I, group II, and group III), which were randomly presented to the subjects. The subjects were given the base form of the verb and asked to provide the correct form of the verbs in the blank.

In that the G-f test was similar to the GJ test. Why was a G-f test also used? Simply to check whether the GJ test was reliable, i.e. whether the type of the task affected the results.

**RE-TELLING TASK**

Since the GJT was a kind of comprehension test and the G-f T was a type of controlled performance task, a story Re-telling Task (RT) was also used to elicit spontaneous production. The cartoon film Robin Hood was chosen because it contains a lot of action and situations to prompt the subjects to use different aspectual verbs. The subjects watched the film without sound. They were allowed to watch one segment of the film, but then it was stopped and they had to describe what had happened. This shifted them to ‘past time’. Then, while they were watching the next segment of the film, they had to describe what was happening right then. This shifted them to ‘present time’. Finally the cartoon was switched off again and they were asked to guess what would happen next. This shifted them to ‘future time’. All responses were (audio) tape-recorded.

**RESULTS AND DISCUSSION**

To begin with, the data show that the early use of verbal morphology is semantically governed by inherent aspect for the lower-level groups, while the later use of verbal morphology comes to be governed by target tense time reference for the higher-level Persian Speakers (PS). Furthermore, the data also support the proposal that the lower-level learners’ use of verbal morphemes can be described as being syntactically governed by aspectual projections, rather than IP.

**OVERALL ASSOCIATION OF ASPECT MARKING WITH VERB TYPE ACROSS THE GROUPS**

Repeated measurement of variance (MANOVA) indicated that the overall interaction of the stative, activity, achievement, and accomplishment verb types with the aspect markings ‘-s’, ‘-ing and PAST was
significant across the PS and NES groups for the GJT. For the PS and NES subjects the interaction of group by aspect marking by verb type was statistically significant (P < 0.05) for all target tenses in the GJT.

In the G-f T, the overall a chi-square test indicated that the association of aspect marking and verb type was significant for the low-level group for all target tenses. In addition, the interaction of aspect marking and verb type was also significant for the mid-level group for present perfect, past, and future perfect target tenses, while that of the overall chi-square was not significant for the high, and NES groups.

In RT, the overall chi-square for the association of aspect marking and verb type was significant for the low-level group for all target times (i.e. present, past, and future times). Moreover, the overall interaction of aspect marking and verb type was significant for present and past target times, while the overall chi-square results were not significant for the high-level group.

**THE USE OF THE ASPECT MARKING '-s'**

**THE USE OF THE ASPECT MARKING '-s' IN THE GJT**

Although repeated measurement of variance indicated that the overall interaction of stative, activity, achievement, and accomplishment verb types with the aspect markings '-s', -ing and PAST was significant across the PS and NES groups for the GJT, one still needs to know is which pairwise means are significant. For example, is the difference between the aspect markings '-s' and -ing within the low-level group significant or is the difference between the aspect marking -ing and the low and/or mid-level learners significant for target tense 'present'? In order to find out which of the pairwise comparisons was significant, a Tukey test was used. The test showed that for the low-level subjects, the aspect marking '-s' was more often preferred with stative (3.58) verbs (e.g. the test item 13) than with activity (2.18) verbs (e.g. the test item 14), achievement (2.26) verbs (e.g. the test item 15) or accomplishment (2.30) verbs (e.g. the test item 16) verbs for the target tense 'present'. These differences were all statistically significant (p < 0.05). However, the mid, high, and NES groups' acceptance of the morpheme '-s' was not selectively associated with stative verbs; rather the '-s' form as the correct target tense form was correctly extended to all verb types (see Research Hypothesis 3a). Examples presented to the subjects in the GJT with various aspectual verbs and the verbal morpheme '-s' for target tense 'present' are as follows:

(12) Reza: How many languages does Ali know?
Javad: He knows three languages now.

(13) Amir: What are you doing?
Ali: I’m listening to the football match on the radio. Listen! "Parvin looks at the goalkeeper."

(14) "Now he kicks the ball."
(15) "And Garoosi shoots it into the goal! It’s a goal for Esteqlal."

The association of the aspect marking '-s' with stative verbs was significant for all target tenses for the low-level subjects (P < 0.05). Therefore, the Research Question 3a that the lower-level learners associate the aspect marking '-s' with the stative verbs is confirmed.

**THE USE OF '-s' FOR THE G-f T**

The cell values of X2 for the '-s' stative were significant for the low-level group for all target tenses and mid-level group as well for present, present perfect and past target tenses, while the correlation of the aspect marking '-s' and stative aspect was not significant for the high and NES groups. This result is in agreement with the answer to Research Hypothesis 3a for the lower-level groups, that the lower-level learners link the aspect marking '-s' with stative verbs. As the learners become more competent they extend the present form '-s' as the correct target tense form from its concentration on statives to the other aspectual categories of activity, achievement, and accomplishment. Examples of the biased use of the aspect marking '-s' with stative verbs for the target tenses 'present perfect' (16-17) and 'future' tense (19-20) are as follows:

(16) Reza (like) ...likes... to play golf in the last two years.
Hossein (enjoy) ...enjoys... staying in a small flat rather than a big house in the last three years.
Amir (hear) ...hears... some good news about his family in the next few days.
Karim has not seen his family for one year. I think he (see) ...sees...them very soon.

THE USE OF '-s' IN THE RT
The cell values of chi square for the stative '-s' marking were significant for the low and mid groups for target time 'present' and for the low group for target times 'past' and 'future' while the correlation between the present form '-s' and stative aspect was not significant for the high group in the RT. The result confirms that the lower-level learners associate the simple present form with stative aspect (see Research Hypothesis 3a).

Some typical biased uses of the '-s' form with stative for the low-level learners for the target times 'present' (20-21), 'past' (22-22), and 'future' (24-25) are shown below:

(20) The king wants to see the Robin Hood.
(21) He is a soldier of king he's keep their money.
(22) The cat likes to take the money and the snake takes the money.
(23) Robin Hood say do nothing and sees picture there and.
(24) The many of the soldier the many soldier they are wants to they take the money.
(25) The four soldiers has all the moneys and he get a sword

THE USE OF PROGRESSIVE FORM
THE USE OF PROGRESSIVE FORM IN THE GJT
A tukey test indicated that the link between the aspect marking -ing and activity verbs was judged more accurate with activity (3.25) verbs (26) than stative (1.56) (27), achievement (1.86) (28), and accomplishment (1.97) (30) verbs for all target tenses in the GJT. The difference was statistically significant (p < 0.05).

(26) Reza smoking a lot today and he is still smoking. It's strange!
(27) Reza liking to play golf in the last two years.
(28) My brother starting to build his house since last month and he hopes to finish it next year.
(29) The dentist checking five teeth since 5 o'clock today.

THE USE OF PROGRESSIVE IN THE G-f T
Progressive marking bears a distinct association with activity in this study in general. For the low-level group, the V + ing without auxiliary affiliates with activity (e.g., the test item 33-34 below), the X2 value for this affiliation was statistically significant, while the X2 value for the association between BE + V + ing with activity aspect was not statistically significant for all target tenses. Moreover, the correlation between the activity verbs and aspect marking -ing without the auxiliary 'be' was also significant for 'present' and 'future perfect' tenses for the mid-level group. The biased association between accomplishment verbs and the aspect marking -ing without the auxiliary 'be' was significant for 'present perfect' and 'future' target tenses for the low level learners, while that of association with other target tenses was not significant. However, the higher level groups and NES did not exhibit an amplified use of the aspect markings -ing without the auxiliary 'be' with activities and accomplishments. The disassociation between the aspect marking -ing without auxiliaries with accomplishment aspect for 'present', 'past', 'past perfect', and 'future perfect' tenses is not in agreement with Research Hypothesis 2 in that the lower-level learners link the aspect marking '-ing' with accomplishments verbs. However the association of accomplishment verbs for target tenses 'present perfect' and 'future' (30-31) and activity verbs (32-33) for all target tenses with the aspect marking -ing without auxiliary supports the hypotheses 2 and 3b respectively, for the low-level group.

(30) The dentist (pull) ...pulling... out my bad tooth; it might be in the near future.
(31) I think the secretary (type) ...typing... the letters in the near future.
(32) Amin (push) ...pushing... his car when Mary gets off.
(33) Narges: What would Shirin like to do?
Roya: Oh, I think she (run) ...running... in the park for an hour.

THE USE OF PROGRESSIVE FORM IN THE RT
The use of progressive without the auxiliary 'be' was significant for the low-level learners for the target times 'present' and 'past' (P < .00001), while the association of activities with the auxiliary 'be' was not significant for the low-level learners. In this study there did not exist a biased association between
activity verbs and the aspect marking -ing without the auxiliary in the context of 'future' time for the low-level group ($P > 0.05$). Examples of the activities with progressive without the auxiliary for the low-level learners in the context of 'Present' (34-35) and 'past' time (36-37) are as follows:

(34) …and the bear come to the street and he walking and singing and he was…
(35) …and she listening and he say something come here and he…
(36) And the bear come to the street and he walking and singing and he was see a one old man…
(37) The Robin Hood and the bear running and they say good-bye and …

Examples of activity progressive form with the auxiliary 'be' for mid-level learners in the context of 'past time' are as follows:

(38) …and Robin Hood was doing something like magical and he got and the snake was hitting and he can't do it…
(39) He took all jewelries and he the king had and the snake was trying to tell him…
(40) And the bear the snake was Robin Hood dresses he is running to joking…

The association between progressive with activity aspect for the low-level group is in line with the Research Hypothesis 3b, whereas the dissociation between the progressive and activity aspect for the higher-level and NES groups is in accordance with target tense form marking, regardless of the type of aspect.

The biased use of progressive without the auxiliary was also a significant feature of accomplishment aspects for the low level group in the context of 'past' time and for the low- and mid-level groups in the context of 'future' time. These findings confirm Research Hypothesis 2, that the lower-level learners link accomplishments with the progressive form -ing. However, there did not exist a biased association between accomplishment aspect and the aspect marking -ing with the auxiliary 'be' for the low-level group for target time 'present'. Examples of progressive form with accomplishments for the low-level group in the context of 'past' time (sentences 41-43) and 'future time' (sentences 44-45) for low and mid groups are:

(41) And the bear walking and take the door and she listening…
(42) Robin Hood and his friend bear, going to the coach and they tell the king…
(43) The bear and wearing and dressing something and…
(44) And bear doesn't don't go and the bear and Robin Hood go and go and the king not going…
(45) And they steal all the jewels and the bear another thing there and the king was had I think they putting the king away off the city…

The difference between stative aspect with the progressive form was not significant for the low-level group, which confirms Research Hypothesis 1, that the lower-level learners do not associate the -ing form with stative verbs.

THE USE OF THE ASPECT MARKING PAST

THE USE OF THE ASPECT MARKING PAST IN THE GJT

A Tukey test showed the PAST form was judged 'very good' with both achievement (3.60) (48) and accomplishment (3.23) (50) verbs while stative (1.70) (46) or activity (1.95) (47) verbs were judged 'very bad' or 'bad'. These differences were all statistically significant ($p < 0.05$) for all target tenses in the GJT.

(46) Yesterday Reza met one of his old friends whom he not saw for several years.
(47) Reza was not in the football field when you arrived. He just played there.
(48) I didn't know that Ali already started building his house.
(49) Reza, who already passed all his exams, was very happy today

THE USE OF ASPECT MARKING PAST IN THE G-f T

A biased use of PAST aspect marking stands out as the most significant feature of achievements in the low-level group for all target tenses and mid-level group for target tenses 'present' and 'past', which confirms the Research Hypothesis 3c, that the lower-level learners associate PAST with achievement verbs. The association of the aspect marking PAST with accomplishment aspect was only statistically significant for the low-level group for target tenses 'past' and 'past perfect' ($P < .05$), which is in harmony with the Research Hypothesis 3d, that the lower-level learners link the aspect marking PAST with accomplishments. As predicted, the correlation between the PAST aspect marking and achievement and accomplishment verbs was not significant for the higher-level and NES groups. Examples of biased use of
achievement verb (50) and accomplishment verb (51) with the aspect marking PAST for the target tense 'past perfect' are as follows:

(50) A thief entered a bank yesterday. When the police got there the thief (just/escape)…just escaped…
(51) Amir Did Mary carry her books upstairs when Reza got to home.
Mahin: No, she (already/carry)...already carried ... them.

THE USE OF ASPECT MARKING PAST IN THE RT
The data showed that achievement aspects exhibit high levels of simple past form use at the low level of proficiency for all target times (i.e. ‘present’, ‘past’, and ‘future’), (P<0.00001). However, the link between the past form and accomplishment aspect was not significant for any target times. The link between the past form with achievements decreases as the subjects become more proficient. The results verify Research Hypothesis 3c and reject Research Hypothesis 3d, that the lower-level learners link achievements and accomplishments with the aspect marking PAST, respectively. Examples of achievements with PAST forms for the low-level learners in the context of ‘Present time’ are as follows:

(52) and ... snake are fall down. He smashed on the king head and...
(53) He put out her money and stole it and...
(54) This is father and this father and this is the friend of father and Robin Hood gave him.

IMPLICATIONS OF THE STUDY: SEMANTIC EVIDENCE
THE DISTRIBUTIONAL BIAS HYPOTHESIS (DBH)
This study had two groups of subjects: PS (Persian Speakers) as the experimental group and Native English Speaker (NES) as a control group. Some studies on the first language acquisition of tense and aspect (e.g., Andersen 1989; Andersen and Shirai 1994; Ramsay 1989) have claimed that learners acquire verbal aspect simply from the input of adult native speakers in terms of aspectual categories. If it were the case that first language learners mirrored the adult speakers’ speech, POA would play no role here, since according to the DBH, first language acquisition is reduced to an input phenomenon (Rhode 1996). In the present study, the NES did all the tasks that the PS did. One possibility is that the NES-directed speech addressed to the learners in the present study might be consistent with the DBH. In this case, the NES' results would not reject the DBH. The data on GJT, G-f T, and RT showed that, contra the DBH, NES did not use verbal aspects to mark aspectual categories neglecting the tense distinction rather they marked verbs in agreement with correct target tense forms.

The results from this study suggest that through the interaction of universal aspectual values with the L2 input, the lower-level learners form their initial L2 grammar. By further exposure to target language input, the learners at higher levels increasingly use the same morphemes to mark correct target tense forms. This study rejects the DBH, that the lower-level learners’ speech mirrors native English speakers’ speech. This allows the correct prediction that there is a final state at which higher-level learners’ use verbal morphemes to mark correct target tense forms. Which linguistic principles or values do the lower-level learners use to mark verbs? The linguistic principles or values that the lower-level learners follow should involve semantic and syntactic correspondences.

REFERENCES

Source of funding: None.

Statement of originality of work: The manuscript has been read and approved by all the authors, the requirements for authorship have been met, and that each author believes that the manuscript represents honest and original work.

Competing interest / Conflict of interest: The author(s) have no competing interests for financial support, publication of this research, patents and royalties through this collaborative research. All authors were equally involved in discussed research work. There is no financial conflict with the subject matter discussed in the manuscript.

Disclaimer: Any views expressed in this paper are those of the authors and do not reflect the official policy or position of the Department of Defense.

Majority of the information gathered are from media sources which don’t reflect the author’s own opinion.

Copyright © 2016 Moeen, AA. and Jabbari AA. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.