The Acquisition of Perfective and Imperfective Aspect: A Comparative Study of Arabic and Japanese Learners of English

Erik Christensen
University of Kansas

1. Introduction

1.1. Statement of topic

The extent to which native language transfer plays a role in second language (L2) learning is a very significant question in the field of second language acquisition (Gabriele, 2005; Schwartz and Sprouse, 1996). The present study investigates the role of transfer in the acquisition of aspect in L2 English. The study compares two different groups of learners whose native languages differ with respect to imperfective aspect: the first group is comprised of native speakers of Najdi Arabic, a language that is similar to English with respect to the interpretation of the imperfective, and the second group is comprised of native speakers of Japanese, a language whose imperfective form shows interesting differences from both English and Arabic. It is well documented that the acquisition of the imperfective presents great challenges to both first and second language learners (Gabriele, 2005; van Hout, 2005; van Hout, 2006; Kazanina and Phillips, 2006; Valian, 2006). With L2 acquisition, some research in this area has focused on how properties of the first language influence second language acquisition, and whether or not the cross-linguistic differences that exist between the L1 and the L2 can be overcome (Montrul & Slabakova, 2002; Gabriele, 2005). The aim of this study is to be able to determine whether the acquisition of imperfective aspect in English is difficult for L2 learners because of transfer from the native language, or if imperfective aspect is difficult to acquire in general, regardless of how it is instantiated in the L1.

1.2. Theoretical background

While tense places an event on a timeline, relevant to the time of speech, aspect on the other hand refers to the internal properties of an event (Comrie, 1976). Tense often refers to past, present, or future events with respect to speech time, while aspect indicates whether or not an event has reached completion (Li and Shirai, 2000).

With respect to aspect, it is important to distinguish between lexical aspect and grammatical aspect. Within lexical aspect, researchers propose that there are four different verb classes. The four verb classes differ with respect to several semantic properties. For example, states and activities differ from accomplishments and achievements with respect to *telicity*, where *telic* verb phrases have an inherent endpoint, and *atelic* verb phrases do not (Ibid., 2000). Grammatical aspect, on the other hand, refers to aspectual distinctions that are marked by auxiliaries and/or inflectional and derivational morphology. For example, in English, be+*ing* encodes progressive aspect (Ibid., 2000).

Activity verbs represent a continuous action but do not contain a clear endpoint. Activity verbs consist of verbs like 'walk' and 'run' as in the example in (1) (Ibid.,1).

(1) Yesterday he ran. (atelic)

In the example in (1), there is no endpoint encoded by the verb phrase. This is the main characteristic of activity verbs. Accomplishments consist of verb phrases like 'make a cake' and 'run a marathon' as in (2).

(2) Yesterday, he ran a marathon. (telic)

Here, unlike (1), we can understand that the action entails a continuous process *and* a point of completion. That is, when he came to the end of the marathon, the event came to completion. Achievement verbs also encode an endpoint but represent an event that is instantaneous Achievement verbs consist of verbs like 'fall' and 'arrive'. If we look at example (3) below, we can see that the verb itself expresses an instantaneous event that begins just before the endpoint is reached.

(3) Yesterday, he arrived at his house.
   (The 'arriving' only occurs at the point in which he reaches the house)

There is an important difference that distinguishes accomplishments and achievements. Let's say that we compare two sentences such as the ones in (4) and (5) that include the adverbial phrase 'in three hours'.

(4) He finished running a marathon in three hours.
   -Continual action over a time span that reached completion.

(5) *He finished arriving in three hours.
   -The action cannot extend over the time span because it is instantaneous.   (Kenny; 1963)

In (4) above, if we were to look at any point in time during those three hours, he would be continually in the process of running the marathon. The difference in (5) is that the verb 'arrive' cannot extend over such a similar time span, specifically because 'arrive' expresses an action that is essentially instantaneous. Finally, state verbs are verbs that represent a condition that essentially has no process or endpoint. State verbs consist of verbs like 'know' and 'to exist' as in (6).

(6) He knows the material.

It is important to keep in mind that in English (as well as the Japanese form *te-iru*) *be+ing* can attach to activity, accomplishment, and achievement verbs, but generally (with some exceptions) cannot attach to state verbs. The aim of this project is to examine the interaction between lexical and grammatical aspect in English, Arabic, and Japanese. Specifically, we examine the interaction between accomplishments and achievements with perfective and imperfective grammatical aspect. The next section outlines the facts that will be relevant for the present study.

1.3. Linguistic background

1.3.1. Contrasts between Arabic and English

In English, perfective aspect is marked by the simple past form of the verb (Smith, 1991). Examples (7) and (8) show an accomplishment verb (ACC) and an achievement verb (ACH) marked with the simple past.

(7) Mary *made* a cake.   (ACC)

(8) Mary arriv*ed* at the house.   (ACH)

In both of the examples (7) and (8) above, the perfective aspect in combination with the telic verb phrases entails completion of the event. In English, imperfect aspect is marked by the form *be+ V-ing* (Comrie, 1976). The progressive form in English never entails completion. Examples (9) and (10) below show both an accomplishment verb (ACC) and achievement verb (ACH) with the past form of *be+ V-ing*. In this study we focus on the past progressive.

(9) Mary *was* mak-*ing* a cake.   (ACC)
(10) Mary *was* arriv-*ing* at the house.   (ACH)

The examples in (9) and (10) indicate that an event of 'making a cake' or 'arriving' was ongoing in the past; these is no entailment that the events ever came to completion. The sentences in (9) and (10) are true regardless of whether or not the event denoted by the verb phrase ever came to completion. Arabic is similar to English in that it marks perfective aspect with the simple past form. Examples (11) and (12) show the simple past with accomplishment and achievement verbs[1].

Past
(11) Maryam   sawwa-t   kaikah
      Mary   make-Perf.3sg.fem   cake-fem-sg
      "Mary made a cake."   (ACC)

The simple past tense with an accomplishment verb such as 'make a cake' in (11) is similar to English in that the interpretation is that the event of making a cake has been completed. Example (12) below shows an achievement verb with the simple past. Again, the interpretation is similar to English.

(12) Maryam   waṣṣla-t
      Mary   arrive-Perf.3sg.fem
      "Mary arrived"   (ACH)

The marking for imperfective aspect in Arabic is uniform across all lexical aspectual verb categories. For accomplishment verbs, imperfective aspect is marked either by the simple present or by adding *gaaʕd* (*still*). As shown in examples (13), (14), and (15) with both accomplishment and achievement verbs, a progressive, ongoing interpretation is available both with the simple present and with the temporal marker *gaaʕd* (*still*).

Present Progressive
(13) Maryam   ta-sbagh   as-syarah
      Mary   paint.3sg.fem.Imper   the-car-fem.sg.
      "Mary paints the car."
      "Mary is painting the car."   (ACC) Ongoing

In example (13) above the interpretation is the present progressive. The same is true in (14).

(14) Al-baab   yin-fatih
      the-door   3sg.masc.Imper-open
      "The door opens"
      "The door is opening"   (ACH) Ongoing

In (15), the presence of *gaaʕd* (still) ensures that there is a progressive interpretation.

(15) Maryam   gaaʕd-a   ta-sbagh   as-syarah
      Mary   sit.PART-fem.sg   3sg.fem.Imperf-paint   the-car
      "Mary is painting the car."   (ACC) Ongoing

In order to change present to past tense, the word *kaan* (was) just needs to be added. Example (16) shows the past progressive.

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[1] The Arabic sentences were taken from Barakat Marakami, cited in D. Kasparek (2007).

Past Progressive

(16) Maryam kaan-at   gaaʕd-a   t-sawwi   kaikah
    Mary   be.past-3sg.fem sit.PART-fem.sg 3sg-Pres.Imperf-make cake-fem.sg
    "Mary was making a cake."   (ACC) Ongoing

Similarly, the progressive form of achievement verbs in Arabic only requires the inclusion of the participle of the verb *kaan* (was). Example (17) shows an achievement verb in the past progressive.

(17) Maryam kaan-at   waasl-at   li-l-beit
     Maryam to-be.past-3sg.fem arrive-Perf.3sg.fem P-the-house
      "Mary was arriving at the house."   (ACH) Ongoing

Any event in the past progressive is ongoing in the past whether or not the event was complete or incomplete. This is exactly like English, where the past progressive does not entail completion.

1.3.2. Contrasts between Japanese and English

In Japanese, accomplishment and achievement verbs are marked for perfective aspect by the simple past tense *V-ta*. Examples (17) and (18) show an accomplishment and achievement verb in the simple past tense. An accomplishment verb marked with the simple past tense entails completion of the event. This is similar to the simple past tense in English.

Past
(18) Taro-ga   hon-o   yon-*da*.
    Taro-NOM   book-ACC   read-past
     "Taro read a book"   (ACC)

(19) Hikoki-ga   kuko-ni   tsui-*ta*.
     Plane-NOM   airport-at   arrive-past.
     "The plane arrived at the airport"   (ACH)

In (19) above, an achievement verb in the simple past entails completion of the event. This is also similar to English. Next we turn to imperfective aspect, which is marked by *te-iru* in Japanese. Example (20) shows an accomplishment verb in the present progressive. The interpretation is present progressive, similar to English.

 (20) Taro-ga   hon-o   yon*de-i-ru*
      Taro-NOM book-ACC   read-Imperf.Pres
      "Taro is reading a book."

Achievement verbs with *te-iru* on the other hand have a different interpretation. Example (20) shows an achievement with the imperfective marker *te-iru*.

(21) Hikoki-ga   kuko-ni   tsui*te-i-ru*
     plane-NOM airport-at   arrive-Imperf-Pres
    "The plane (arrived and) is at the airport"
    "The plane has arrived at the airport"   (Gabriele, 2006, 2)

The example in (21) cannot be interpreted as *the plane is arriving*. In example (21) above, completion is entailed. This is different from English and will be an important contrast for the present study. In Japanese, both accomplishment and achievements in the past hold the same aspectual interpretation that they do in the present.

The past forms are marked respectively by *V + te-i-ta*. Examples (22) and (23) show Japanese accomplishment and achievement verbs with *te-ita*.

(22) Taro-ga   hon-o   yon*de-i-ta*
     Taro-NOM book-ACC   read-imperf.past
     "Taro was reading a book."

(23) Hikoki-ga   kuko-ni   tsui*te-i-ta*
     plane-NOM airport-at   arrive-imperf-past
     "The plane (arrived and) was at the airport"
     "The plane had arrived at the airport"

In summary, if we form our predictions on the basis of a transfer model such as Full Transfer/Full Access (Schwartz and Sprouse, 1996), because the imperfective in Arabic carries the same interpretation as the English progressive we expect little difficulty for Arabic learners of English. However, because achievement verbs with *te-iru* in Japanese entail a different interpretation (completed) than those in English (progressive), we expect difficulty for Japanese learners of English. If on the other hand, imperfectives are simply difficult for second language learners in general, we will not see differences between the two learner groups. The simple past has been included as a control in this study. No difficulty is predicted for either group.

2. Previous studies in L1 and L2 acquisition

2.1. Studies in L1 acquisition of tense and aspect

I will review several studies on the L1 acquisition of aspect because they have greatly influenced the design of the present study. Wagner (2001) examined whether children have knowledge of tense and aspect during the initial stages of combinatorial speech. The content of Wagner's experiment was divided between the past and present tenses, while focusing on imperfect aspect for both categories. The child would be shown a complete event such as, "Kitty fills in a puzzle by inserting pieces into appropriate slots" Then, the child would be shown an incomplete event such as, "Kitty only fills in half the pieces". Finally, the test query would be one of the following, "Show me where the kitty *is/was* filling in a puzzle" (675). Regardless of completion, the target response for the past-progressive form (*was* V-*ing*) was always location #1, and the target response for the present progressive form (*is* V-*ing*) was always location #2. The results of this experiment showed that the 2 year olds had difficulty with the past progressive when the event was incomplete. Wagner argued that the results showed that the 2-year-olds needed aspectual information (complete vs. incomplete) in order to successfully distinguish between the past-time and present-time events. That is, when the past time event lacked completion, "the two year olds did not appear to understand the meaning of the tensed auxiliaries" (678).

Van Hout (2005) focused on how Polish children acquire aspectual contrasts. In Van Hout's methodology, Van Hout presented children with three different kinds of scenarios (ongoing, complete, incomplete). In the present study we have adopted her use of these three contexts. Her set up was one where subjects were told a story using pictures. The 1st picture showed the start of an event, for example Mickey builds a sandcastle. The 2nd picture showed doors being closed so that the event could no longer be seen. Finally, a big bird with big eyes looks through the door and tells the child what it saw. This acted as the test sentence. Here is an example:

"One day Mickey Mouse was on the beach. He was playing in the sand.
He decided to build a sand castle and got to work. See?
But the doors closed, so we couldn't see any further what happened.
Let's ask Blue Bird to look behind the doors.
Mickey was building a sand castle. (ex. imperfect aspect)
Is the right picture there?" (child was shown two contrasting pictures)

There were three conditions. In condition 1, children had to choose between a completed and ongoing situation. In condition 2, children had to choose between a completed and incomplete situation, and in condition 3 children had to choose between an ongoing and incomplete one. The results showed that children from the ages of 2 to 4 performed target-like on perfective aspect in conditions 1 and 2 (*completed vs. ongoing* and *completed vs. incomplete*). Children, like adults, accepted the completed action with the perfective aspect. However, in condition 3 (*ongoing vs. incomplete*) children seemed to be at a loss and accepted both ongoing and incomplete for the perfective aspect, while adults accepted neither. Also, when it came to imperfective aspect, unlike the adults who only accepted ongoing, children of all ages accepted all three situations. An interesting point is that while the 2 and 4 year olds distinguished between perfective and imperfective, the 3 year olds did not. They accepted the imperfect aspect to apply to the completed actions. Van Hout said that this shows that children have a strong command of perfective aspect at an early age, yet it takes more time to fully grasp imperfective aspect, and this is due to children being unable to place the sentence correctly in the discourse context.

Van Hout (2006) also found that children across languages have trouble with imperfective aspect. In this cross-linguistic study, Polish, Dutch, and Italian children were tested on perfective and imperfective aspect. The results of this study showed that for the perfective, the Polish children scored 80% correct. The Dutch children averaged 63% correct, and then the Italian children scored 54% correct. Both Dutch and Polish children did better on perfective than imperfective. For the imperfective, the Italian children scored on average the 62% correct (although this is still relatively low, just above chance level), followed by the Dutch children with 32%, and then finally the Polish children who scored on average 18%. Based on these results, it is clear that children initially do have trouble acquiring imperfective aspect.

Kazanina and Phillips (2006) investigated the extent to which Russian-speaking children comprehend the semantics of imperfective aspect using four experiments. In the first two experiments children between the ages of 2;6 to 6;9 were tested using a Truth-Value Judgment task. Here, a story was told where a toy animal goes down a road with three landmarks, a flowerbed, a castle and a tree. For example, the monkey is concerned with building a smurf. At the first location the flowerbed, the monkey starts to assemble the smurf but does not complete it. At the second location the castle the monkey assembles the smurf to completion. At the last location the tree the monkey decides not to do anything at all. The child is then asked questions with both Perfective and Imperfective aspect, such as "Where did the monkey assemble the smurf?" (correct answer: location 2), "Where was the monkey assembling a smurf?" (correct answer: location 1 and 2). The results of these experiments showed that Russian-speaking children do well with perfective aspect but have trouble with imperfective aspect. The trouble with the imperfective was that the children only associated it only with the complete event (location 2), not like the adults who pointed to both the complete *and* incomplete event. The relatively poor results for the imperfective in both of these experiments suggest that the children associated the imperfective only with completion.

Experiments 3 and 4 aimed to examine the source of the difficulty with the imperfective. In order to do this, they describe two different approaches to this problem of the imperfective. In the field of semantics there are two contrasting approaches, the first one being the *perspective-based* approach and the other being the *event-based* approach. The *perspective-based* approach states that imperfectives suspend completion entailments because they impose a limit on the perspective of the action and are usually expressed by an overt temporal marker such as *when* or *while* (Borik, 2002; Comrie, 1976; Demirdache & Uribe-Etxebarria, 1997, 2000, 2005; Kamp & Reyle, 1993; Klein, 1994, 1995; Reichenback, 1947; Smith, 1991). The *event-based approach*, on the other hand, is concerned with how speakers access an event label when exposed to only part of an event and how an incomplete event can be labeled with an imperfective predicate (Bach, 1986; Dowty, 1979; Parsons, 1990; Landman, 1992). Kazanina and Phillips test the predictions laid out by each approach to the imperfective stated above. The perspective-based approach would predict that children should interpret events that have an explicit temporal marker such as a *while*-clause that cues an insider perspective on the event. An event-based approach says that the existence of a temporal marker has no effect either way.

In Experiment 3, 34 children ranging from the ages of 3;2 to 6;9 were further tested on their understanding of the imperfective. The children were tested on a scenario where a girl cleans a table, and at the same time a boy waters flowers. The boy finishes watering the flowers before the girl finishes cleaning the table and starts to ride a bike. Eventually, the girl finishes cleaning the table, but not during the timeframe where the boy waters the flowers. The test sentences that the children were asked contained an event that reached completion with an overt

temporal marker, a *while*-clause limiting the scope of the action. For example, "While the boy was watering the flowers, the girl was cleaning the table" and "While the boy was watering the flowers, the girl cleaned (all of) the table." To adult speakers, only the imperfective (was cleaning) can be true given the overt temporal marker. In experiment 4, 21 children of the ages ranging from 3;3 to 6;9 were tested. The only modification to this experiment was that the event where the girl cleaned the table did not reach completion. However, the overt temporal marker *while* was still present.

The results in Experiment 3 show children scored very high by correctly rejecting the perfective statement at a rate of 89% and correctly accepting the imperfective statement at a rate of 91%. In experiment 4, children did almost equally as well as experiment 3. The children scored 90% correct by rejecting the perfective statement and 84% correct by accepting the imperfect statement. Therefore, it seems that the temporal markers facilitated the comprehension of the imperfective for the children in line with the *Perspective-based* approach. Kazanina and Phillips conclude that the existence of the overt temporal marker *while*- provided an appropriate perspective for the action, and they analyzed that children's failures in experiments 1 and 2 were due to their use of a wrong perspective interval. Therefore, they argue that the *Perspective-based* approach to the imperfect paradox made the correct prediction about the way in which children perceive aspectual-marked events. The present study makes use of the experimental design pioneered by Kazanina and Phillips.

In summary, the L1 studies have shown so far that imperfective aspect is more difficult to acquire than perfective aspect. However, this difficulty can be overcome by using a design like Kazanina and Phillip's (2006) that provides a temporal reference.

2.2. Second language acquisition studies

Several recent studies on the acquisition of aspect in L2 acquisition have focused on the role of transfer and also whether or not second language learners have access to Universal Grammar. Montrul and Slabakova (2002) tested whether or not learners of Spanish can acquire the semantics of the preterit and the imperfect. In this experiment there were 71 adult English-speaking participants who had learned or were learning Spanish in a formal setting and whose proficiency ranged from intermediate to advanced. The proficiency test was adapted from the DELE (*Diploma de Español como Lengua Extranjera*). Their mean age was 25.93. 23 native Spanish speakers acted as the control group. The methodology consisted of two tasks; a morphology test and a sentence conjunction judgment task. During the morphology task, participants read a passage from a story and were given two options for verb morphology and had to choose the correct verb form that fit the context. There were a total of 30 verbs and the appropriate tense had to be selected. The expected responses were equally divided between 15 Preterit and 15 Imperfect. A second task asked the participants to look at a list of sentences of two coordinated clauses which were conjoined by the word *y* "and" or *pero* "but". Some of the combinations made sense while others were contradictory. Participants had to judge them on the basis from -2 (illogical) to 2 (logical). For the most part, the sentences were made up of minimal pairs where the Imperfect tense in the first clause made the sentence logical, while the Preterit made it illogical. An example is given below.

(a) La clase era (imperf) a las 10 pero empezó a las 10:30.
     The class was   at 10   but started at 10:30.
         -2   -1   0   1   ②

(b) La clase fue (pret) a las 10 pero empezó a las 10:30.
     The class was   at 10   but started at 10:30.
         ⟨-2⟩   -1   0   1   2

The results were categorized accordingly showing the outcomes of the native, advanced, and intermediate groups. There were 42 intermediate speakers and 29 advanced speakers. The mean score of the morphology test for the intermediate group was 21.2 out of 30, and the mean score for the advanced was 26.72 out of 30. Therefore, the learners do quite well on the test of morphology. Concerning the sentence conjunction judgment task, the results show that native speakers distinguished between Preterit and Imperfect tenses between

accomplishment, achievement, and state predicates. The learners also generally followed this pattern but they showed difficulty with achievements in the imperfective. This was an interesting result because achievements in the imperfective are interpreted similarly in English and Spanish. This is a result we will return to in the discussion of our own results.

 Gabriele (2005) investigated how native Japanese speakers learning English interpret the semantics of the English progressive, looked at both the present and past progressive. Gabriele predicted that due to the difference between English and Japanese achievement verbs in the progressive form that was reviewed earlier, native Japanese speakers will have trouble interpreting achievement verbs in the progressive, while being able to interpret accomplishment verbs similarly to native English speakers. This study tested 101 Japanese learners of English. There were three groups, low (n=46), intermediate (n=39), and high (n=16) based on results of the Michigan listening comprehension test. Also, Gabriele tested a group of Japanese near native speakers (n=9) living in New York. A control group of native English speakers (n=23) were also tested. Participants were given an interpretation task, where learners listened to recorded stories and looked at two pictures. This task targeted accomplishments and achievements in the past, present progressive, and past progressive, and the test included eight accomplishment verbs and eight achievement verbs. After each story, participants were presented with a sentence and asked to judge on a scale of 1-5 whether or not the sentence was compatible with the story (5 being highly compatible). For each verb, a complete and an incomplete context were developed. Below are examples of each type along with predicted responses from native English speakers and L1 Japanese.

(14a) *paint a portrait*: Complete Story Context
Picture 1: Ken is an artist. At 12:00 he begins to paint a portrait of his family.
Picture 2: At 8:00 he gives the portrait to his mother for her birthday.

	English Native	L1 Japanese
Ken is painting a portrait of his family.	1	1
Ken was painting a portrait of his family.	5	5

(14b) *paint a portrait*: Incomplete/Ongoing Story Context
Picture 1: Ken is an artist. At 12:00 he begins to paint a portrait of his family.
Picture 2: At 12:30 he paints his mother and father.

	English Native	L1 Japanese
Ken is painting a portrait of his family.	5	5
Ken was painting a portrait of his family.	5	5

(15a) *arrive*: Complete Story Context
Picture 1: This is the plane to Tokyo. At 4:00 the plane is near the airport.
Picture 2: At 5:00 the passengers are at the airport.

	English Native	L1 Japanese
The plane is arriving at the airport	1	5
The plane was arriving at the airport	5	5

(15b) *arrive*: Incomplete/Ongoing Story Context
Picture 1: This is the plane to Tokyo. At 4:00 the plane is near the airport.
Picture 2: There is a lot of wind. At 4:30 the plane is still in the air.

	English Native	L1 Japanese
The plane is arriving at the airport.	5	1
The plane was arriving at the airport.	5	1

The results for the accomplishment verbs were in line with the predictions: learners patterned like native speakers by giving high scores to the present progressives in incomplete contexts and giving them low scores in the complete context. On accomplishments in the past progressive, individual t-test results showed the Low group

was more willing than native English speakers to incorrectly accept the complete context. The results for the learners at higher proficiency levels did not deviate significantly from those of the native English speakers.

For the present-progressive achievement verbs, the Low and Intermediate groups incorrectly accepted the complete context, suggesting transfer from the L1. Even the more advanced speakers were more willing to incorrectly accept the complete context than the native English speakers. The results for the achievements in the past progressive also showed that all learner groups had difficulty.

Based on the results of this study, Gabriele argues that there is a clear interaction with tense during the acquisition of aspect in the L2. The results suggest that with both accomplishments and achievements, the past progressive is more difficult than the present progressive. Furthermore, particularly with achievements there seems to be a tendency for learners to prefer the past progressive to refer to completed events. This behavior resembles a behavior observed by Wagner (2001). In Wagner's study, children acquiring English as a first language had the tendency to accept accomplishment verbs in the past progressive with complete events. She concluded that children conflate both tense and aspect so that they interpret past tense as perfective aspect. Gabriele suggests that L1 and L2 learners may follow the same developmental path. However, due to the differences between Japanese and English we cannot firmly conclude how much of the difficulty is due to transfer and how much of the difficulty is due to developmental difficulty in acquiring the semantics of imperfective forms.

The collective results of these studies show that generally, imperfective aspect is more difficult to acquire than perfective aspect. In particular, the past progressive is still difficult even for advanced language learners. Interestingly some difficulty is found in the acquisition of aspect even when the L1 and L2 demonstrate similar properties. However, so far, no one has compared two different L1 groups acquiring the English past progressive to examine how much difficulty is attributed to properties of the L1 alone.

2.3. Statement of purpose

The review of the literature above has shown that imperfective aspect presents a challenge to both first and second language learners. The aim of this study is to compare one language that is similar to English, Arabic, and one language that is different from English, Japanese, in order to ultimately see whether the acquisition of imperfective aspect in English is difficult for L2 learners who lack these linguistic properties in their L1, or if imperfective aspect is difficult to acquire in general, regardless of how it is instantiated in the L1.

2.4. Hypothesis

We predict that native Arabic speakers will perform similarly to native English speakers on all tasks based on transfer from the L1. For accomplishment verbs, we expect that the L1 Japanese speakers will perform similarly to the L1 Arabic and L1 English speakers. We also predict that L1 Japanese speakers will perform similarly to both English and Arabic speakers for achievement verbs. However, it is expected that L1 Japanese will not perform similarly to Arabic and English for achievement verbs.

3. Methods

3.1. Experiment 1: perfective/imperfective and accomplishments/achievements

3.1.1. Experiments 1 and 2: participants

Participants in this study included 17 male Arabic speakers of the Najdi dialect learning English[2] as a second language and 16 native Japanese speakers learning English as a second language. 9 of the native Japanese

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[2] All Arabic data was collected in a previous study conducted by the students in a graduate level seminar under Dr. Alison Gabriele.

speakers were tested at Oberlin University in the city of Machida, located in Tokyo, Japan. The other 7 were recruited and tested at the University of Kansas. As an English proficiency measure, the learners were given the Michigan Listening Comprehension Test, a 45-question test. Arabic speakers had an average score of 30.9, and the Japanese participants had an average score of 34.6. The proficiency scores of the two groups were not significantly different. All of the Arabic speakers began learning English approximately around seventh grade. This was also the case for the Japanese speakers with the exception of one participant who began studying English at the age of 3 years old. 16 native English speaking college students were also tested as the control group for this experiment at the University of Kansas.

3.1.2. Experiment 1: materials

This experiment was set up to test the interpretation of the simple past and past progressive with accomplishment and achievement verbs. This task always involved the participant reading a short story followed by three sentences. The participant had to judge the degree to which each sentence was compatible with the story. Experiment 1 included four accomplishment and four achievement verb types. The accomplishment verbs were *draw the map*, *make the cake*, *clean the kitchen*, and *paint the house*. The achievement verbs were *enter*, *leave*, *return*, and *come*. Each verb appeared in a complete, incomplete, and ongoing context following Van Hout (2005). Following each context, three sentences were given: a simple past sentence, a past progressive sentence and a filler sentence. On a scale from 1 to 5 (1 meaning completely incompatible with the story, and 5 meaning completely compatible with the story) participants were asked to judge each sentence. Because the interpretations for the simple past and past progressive with accomplishment verbs are similar cross-linguistically, all language groups are expected to perform similarly. Examples (23), (24), and (25) show the accomplishment verb *make the cake* in each respective context, along with the expected interpretations by the native speakers in each of the respective language groups.

(24) *Make the cake*: Complete Context

Yesterday at 4:00 Mary decides she wants to make a cake for her friend's birthday. She puts all of the ingredients on the counter and gets to work. At 6:00 the cake is finished.

Accomplishment	English	Arabic	Japanese
Past: *Mary made the cake*	5	5	5
Past progressive: *Mary was making the cake*	5	5	5

For the complete context, both sentences are compatible with the context of the story. Because accomplishment verbs in the complete and past imperfective forms have identical entailments across all three languages, the predictions for both Arabic and Japanese are that they will behave similarly to English for both sentences.

(25) *Make the cake*: Incomplete Context

Yesterday at 4:00 Mary decides she wants to make a cake for her friend's birthday. She puts all of the ingredients on the counter and gets to work. At 5:00 she realizes her oven is broken. She decides to buy a cake instead.

Accomplishment	English	Arabic	Japanese
Past: *Mary made the cake*	1	1	1
Past progressive: *Mary was making the cake*	5	5	5

For the incomplete context, the simple past should be rejected, and the past progressive should be accepted. The entailments for Arabic and Japanese are the same as English, so this holds true for both of these languages as well. Therefore, we expect that they will perform similarly to English, by correctly rejecting the simple past and correctly accepting the past progressive.

(26) *Make the cake*: Ongoing Context
> Yesterday at 4:00 Mary decides she wants to make a cake for her friend's birthday. She puts all of the ingredients on the counter and gets to work. At 4:30 she begins to mix the batter. It is hard work.

Accomplishment	English	Arabic	Japanese
Past: *Mary made the cake*	1	1	1
Past progressive: *Mary v making the cake*	5	5	5

For the ongoing context, much like the incomplete context, the simple past should be rejected, while the past progressive should be accepted. The entailments for the accomplishment verbs are identical across all three languages. Therefore, the predictions are the same for all three languages.
Examples (26), (27), and (28) show the achievement verb *enter* in each respective context, along with the expected interpretations by the native speakers in each of the respective language groups.

(27) *Enter*: Complete Context
> Lisa is a student at KU. She decides to buy a ticket to see a Kansas City Royals baseball game. Last Friday at 6:00 she arrives at the stadium. The security guard tells Lisa that he needs to look at her ticket and search her bag before she can go into the stadium. Lisa gives the security guard her ticket and shows him her bag. At 6:05 she walks into the stadium.

Achievement	English	Arabic	Japanese
Past: *Lisa entered the stadium.*	5	5	5
Past progressive: *Lisa v entering the stadium.*	5	5	5

For the complete context, both the simple past and past progressive sentences should be accepted. The simple past should be accepted because it inherently entails completion, and the past progressive should be accepted, because in the case for English and Arabic, it holds true regardless of whether or not the event reached completion. In the case for Japanese, however, it should be accepted because achievement verbs marked with the imperfective entail completion.

(28) *Enter*: Incomplete Context
> Lisa is a student at KU. She decides to buy a ticket to see a Kansas City Royals baseball game. Last Friday at 6:00 she arrives at the stadium. The security guard tells Lisa that he needs to look at her ticket and search her bag before she can go into the stadium. Lisa gives the security guard her ticket and shows him her bag. At 6:03 it suddenly begins to rain really hard. Lisa takes her bag and runs to her car. The game is cancelled.

Achievement	English	Arabic	Japanese
Past: *Lisa entered the stadium.*	1	1	1
Past progressive: *Lisa v entering the stadium.*	5	5	**1**

For the incomplete context, the simple past should be rejected, but the past progressive should be accepted. Because the interpretations for achievement verbs in both the past and past progressive are the same in Arabic as they are for English, the predictions are the same for Arabic. In Japanese, however, achievement verbs in the past progressive entail completion, and since it is an incomplete context, we predict that L1 Japanese will incorrectly reject the past progressive, but still correctly reject the simple past.

(29) *Enter*: Ongoing Context

> Lisa is a student at KU. She decides to buy a ticket to see a Kansas City Royals baseball game. Last Friday at 6:00 she arrives at the stadium. The security guard tells Lisa that he needs to look at her ticket and search her bag before she can go into the stadium. Lisa gives the security guard her ticket and shows him her bag. The security guard looks through her bag slowly.

Achievement	English	Arabic	Japanese
Past: *Lisa entered the stadium.*	1	1	1
Past progressive: *Lisa entering the stadium.*	5	5	**1**

For the ongoing context, the simple past should be rejected, but the past progressive should be accepted. In Arabic, the entailments for achievement verbs in the past and past progressive are identical to English, so the predictions are the same. However, for Japanese, achievements in the simple past have identical entailments as English, so we expect L1 to correctly reject the past. Achievement verbs in the past progressive also entail completion, so we expect L1 Japanese to incorrectly reject the past progressive.

3.1.3. Procedure

Data collection for this experiment took place at two different locations. First, Japanese speakers were tested at Oberlin University, located in the southern part of the Tokyo prefecture. The second half of Japanese speakers was tested at the University of Kansas. All participants who were native English speakers were tested at the University of Kansas. Japanese participants first signed a consent form and then filled out a sheet asking about their background information. Participants were beforehand then given a word list containing all of the significant words that appeared in the experiment and was also allowed to refer to the wordlist during the experiment. Participants first began by taking the Michigan listening comprehension test in order to establish the participants' level of proficiency in English. Next, participants took an experiment that was cumulative of both experiments 1 and 2. No time limits were placed on this task, but participants were not allowed to look back or return to problems once they finished answering them. After they completed the experiment, participants were asked about their general impressions of the experiment and how they felt about it. Native speakers also signed a consent form and filled out a background information sheet. Afterwards, they were asked about their impressions of the task and how they felt about it. Again, just like the Japanese participants, no time limits were placed on the task, but looking back or repeating answers was not allowed. The Arabic learners were tested in one group session, which was conducted in the fall of 2006 in the context of a second language seminar taught by Alison Gabriele. Learners took the proficiency test, took a short break and then took the experiment[3].

3.1.4 Experiment 1: results

In Experiment 1, both Arabic and Japanese speakers' results were fairly similar with respect to accomplishment verbs. Figure 1 shows the results for the accomplishments in past tense. All learners correctly accepted the past

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accomplishments in complete contexts. All of the Arabic speakers averaged a 5 across the board, and the Japanese speakers averaged 4.8. The native speakers averaged 5. These results for the complete context conform to our predictions. For the incomplete context, Arabic speakers correctly rejected the past-tense accomplishments, with an average score of 2.0, matching our predictions, but the Japanese speakers were less willing to reject the past accomplishments with the incomplete context, averaging 2.7, which do not conform to our predictions. The native speakers had an average of 2.0. For the ongoing context, the Arabic group had an average of 3.2, and the Japanese group had an average of 3.6. They were less willing to reject the ongoing context than native speakers, who averaged at 2.3. These results were not expected and we will return to this point below.
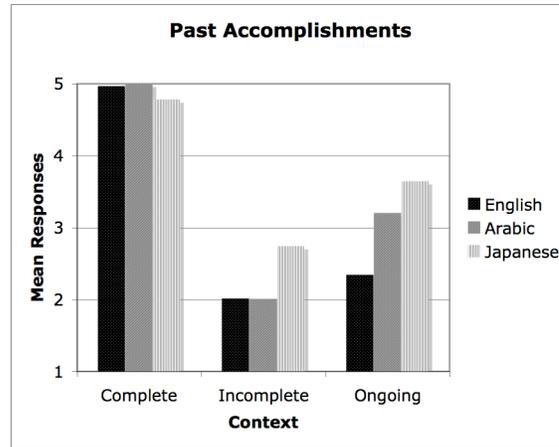
Figure 1: Results for the Past Tense Accomplishments for Arabic, Japanese, and English participants.

For past tense achievement verbs, Arabic and Japanese speakers scored fairly similar in all contexts. Figure 2 shows the results for achievement verbs in the past tense. All learners correctly accepted the past-tense achievement verbs with the complete contexts, and these results matched our predictions. Arabic speakers averaged 4.75, and Japanese speakers averaged 4.6, while native speakers averaged 4.9. For the incomplete context, Arabic speakers averaging at 1.8 were less willing to reject past tense achievement verbs than the native speakers, 1.5, and Japanese speakers, 1.75. However, all language groups clearly rejected the past tense with incomplete contexts, conforming to our predictions. For the ongoing context, again both groups were less willing to reject the simple past than the native speakers. The Arabic group had an average of 3.0, and the Japanese group had an average of 2.9, while the native speakers had an average of 2.3. The results for the ongoing context were not expected.
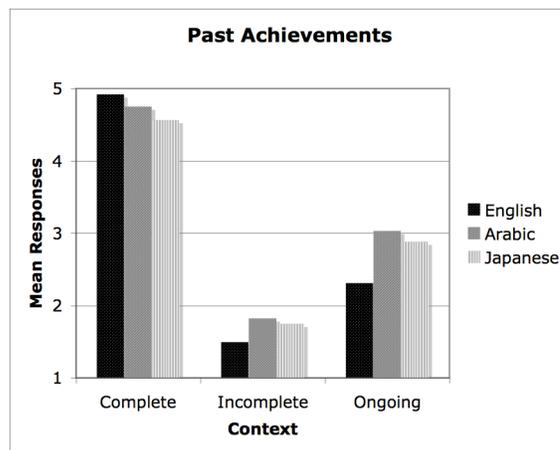
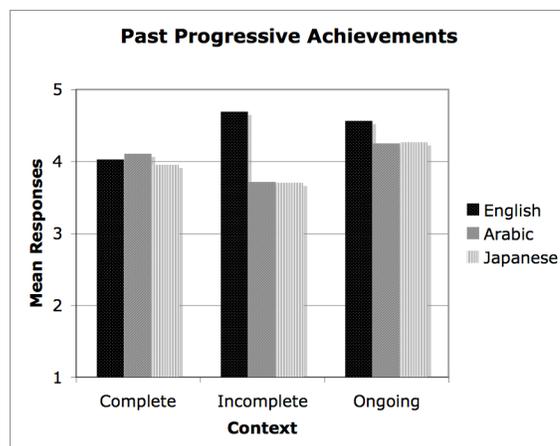**Figure 2:** Results for the Past Achievements for Arabic, Japanese, and English participants.

In general, results for the past-tense accomplishment and achievement verbs were as we expected. Both learner groups correctly accepted the past tense with the complete contexts and correctly rejected the past tense with incomplete and ongoing contexts. However, an interesting point was the general less willingness of all language groups to reject the past accomplishment and past achievement verbs in ongoing contexts compared to incomplete contexts. A similar phenomenon emerged in Van Hout (2005), where Polish children were at a loss when presented with both incomplete and ongoing contexts with perfective aspect, and they incorrectly accepted both. One possible explanation for this might be the influence of the verb's lexical aspect. Without completion both accomplishment and achievement verbs are telic, thus it is easy to assume that they will eventually reach an endpoint. Without the explicit information telling the learner that the event did not reach completion, as in the ongoing context, there may be the tendency to want to assume that the event will reach its endpoint. Therefore, the lexical aspect of the verb would allow the language learner to interpret the ongoing context as slightly

Figure 3 shows the results for the accomplishment verbs in the past progressive. Both Arabic speakers, with an average of 4.2, and Japanese speakers, with an average of 4.3, correctly accepted the past progressive accomplishment verbs with the complete context, which was close to the native speakers' average of 4.4. We predicted that both language groups would perform similarly to English native speakers. Both language groups also correctly accepted the past progressive accomplishments with the incomplete contexts. Arabic speakers averaged 4.2, and Japanese speakers averaged 4.3, while the native speakers averaged at 4.5. These results also matched our predictions. For the ongoing context, Arabic speakers had an average of 4.4, the Japanese speakers had an average of 4.5, and the native speakers had an average of 4.8. We expected these results. Because both groups correctly accepted the past progressive in all contexts, it shows that they don't have difficulty with past progressive accomplishment verbs.
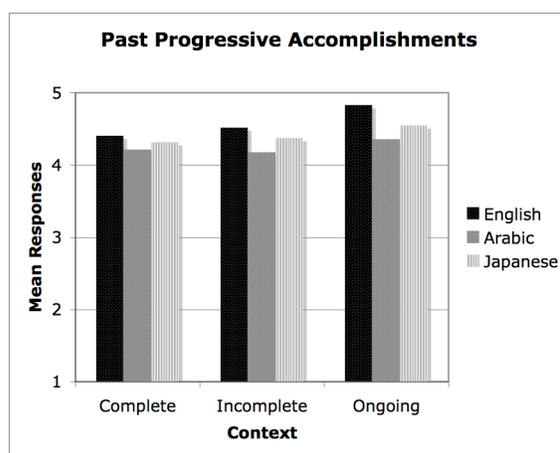
Figure 3: Results for the Past Progressive Accomplishments for Arabic, Japanese, and English participants.

Figure 4 shows the results for the past progressive achievement verbs. All language groups correctly accepted the past progressive achievement verbs with the complete contexts. And, both learner groups performed similarly to English native speakers. The Arabic speakers averaged 4.1, the Japanese speakers along with the native speakers averaged 4.0, and the native speakers also averaged 4.0. We expected that both learner groups would behave similarly to native speakers, and these predictions were borne out. Both Arabic and Japanese speakers judged past progressive achievements in incomplete contexts less willingly than they should have, both with averages of 3.7, but native English speakers were more willing to accept these, with an average of 4.7. For the ongoing context, both learner groups accepted the past progressive, but were less willing than native speakers. The Arabic group averaged 4.25, the Japanese group averaged 4.3, while the native speakers averaged 4.6. The Arabic group conformed to our expectations, but the Japanese group did not conform to our expectations by correctly accepting the ongoing context with the past progressive achievement verbs.

Figure 4: Results for the Past Progressive Achievements for Arabic, Japanese, and English participants.

The results of Experiment 1 indicate that both learner groups have a strong command of the simple past and past progressive accomplishment verbs. However, both groups showed a little difficulty with past progressive achievement verbs in incomplete contexts. A similar pattern emerged in Wagner (2001) where the two-year-old children were unable to correctly choose the correct location of the kitty performing an incomplete action. It appeared that the children relied on aspectual information such as completion in order to decide upon a location. A similar pattern also emerged in Gabriele (2005) with Japanese L2 learners of English. In Gabriele's study, all three groups of low, intermediate, and advanced learners had difficulty with the achievement verbs in past progressive. Low and intermediate learners incorrectly accepted complete contexts over incomplete contexts with past progressive achievement verbs, and advanced learners did not distinguish between either of the contexts. In general, the results of Experiment 1 were similar to our predictions. Both groups performed as expected on past tense accomplishment and achievement verbs and past progressive accomplishment verbs. The only exception was the past progressive achievement verbs. Although we expected the Japanese speakers to have difficulty, we did not expect that the Arabic learners would display this same pattern. This shows the possibility that there is something intrinsically difficult about the past progressive that is not based on the properties instantiated in the L1 alone.

3.2. Experiment 2: inclusion of temporal reference

3.2.1. Experiment 2: materials

Experiment 2 was an extension of Kazanina and Phillip's study. Stories included the temporal reference marker *while* in order to limit the scope of the action. The integration of the overt temporal marker *while* limits the scope of the action, thus, cuing an insider perspective on the event. Experiment 2 was comprised of four accomplishment and four achievement verbs. Accomplishment verbs included *make the sweater*, *build the doghouse*, *replace the windshield*, and *wash the pile of dishes*. Achievement verbs included *enter*, *leave*, *return*, and *come*. Again, the options for each context include past, past progressive, and a filler sentence. Examples (30) and (31) show an accomplishment verb in both contexts.

(30) *Build a doghouse*: Complete Context

> Miriam is my sister. On Saturdays, Miriam usually does chores like grocery shopping and laundry. I usually work outside. Last Saturday, I decide to build a doghouse. On Saturday at 12:00 Miriam leaves to go shopping. I go to the tool shed and get wood, nails, and a hammer. At 1:00 Miriam returns home from shopping. I am not finished with the doghouse yet. Miriam then starts to do the laundry. At 2:00 she comes to see if the doghouse is finished. I am finally done. It looks great.

Accomplishment	English	Arabic	Japanese
Past: *While Miriam was shopping, I built the doghouse.*	1	1	1
Past progressive: *While Mir was shopping, I was building the doghouse.*	5	5	5

For the complete context, the correct judgment is 1 with past tense accomplishment verbs. All language groups should perform alike, because all language groups do not attach past progressive accomplishments with completion entailments. With the past progressive accomplishment verbs, the correct judgment is 5. Again, all language groups are expected to perform similarly, because every group associates past progressive accomplishment verbs with incomplete entailments.

(31) *Build a doghouse*: Incomplete Context

> Miriam is my sister. On Saturdays, Miriam usually does chores like grocery shopping and laundry. I usually work outside. Last Saturday, I decide to build a doghouse. On Saturday at 12:00 Miriam leaves to go shopping. I go to the tool shed and get wood, nails, and a hammer. At 1:00 Miriam returns home from shopping. I am not finished with the doghouse yet. Miriam then starts to do the laundry. At 2:00 she comes to see if the doghouse is finished. The doghouse is not done yet and it has just started to rain. Miriam and I run inside to get out of the rain.

Accomplishment	English	Arabic	Japanese
Past: *While Miriam was shopping, I built the doghouse.*	1	1	1
Past progressive: *While Mir was shopping, I was building the doghouse.*	5	5	5

Examples (32) and (33) show the achievement verb *leave* in each respective context, along with the expected interpretations by the native speakers in each of the respective language groups.
Because of the similarities between Arabic and English, similar performance is predicted for the Arabic learners and English native speakers in all contexts. For Japanese learners on the other hand, difficulty is predicted with the past progressive in both contexts. This result is predicted because achievement verbs with *te-ita* in Japanese entail completion. If the learners interpret 'was leaving' as 'left' then the Japanese learners will actually treat the simple past and past progressive in the same way.

(32) *Leave the house*: Complete

> Sara is my roommate. On Tuesdays I have class at 10:15 in the morning but Sara doesn't have any classes. On Tuesday at 10:00 Sara turns on the television and watches the weather report. I am in a hurry to go to school. I put on my jacket and open the door. But then I realize that I need to find my notebook for class. At 10:03 Sara turns off the television and starts to make breakfast. I say goodbye and leave the house in a hurry.

Achievement	English	Arabic	Japanese
Past: *While Sara was watch television, I left the house.*	1	1	1
Past progressive: *While Sara watching television, I was leaving house.*	5	5	**1**

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(33) *Leave the house*: Incomplete

> Sara is my roommate. On Tuesdays I have class at 10:15 in the morning but Sara doesn't have any classes. On Tuesday at 10:00 Sara turns on the television and watches the weather report. I am in a hurry to go to school. I put on my jacket and open the door. But then I realize that I need to find my notebook for class. At 10:05 Sara turns off the television and starts to make breakfast. I am upset because I can't find my notebook. I decide not to go to class. I take off my jacket and close the door.

Achievement	English	Arabic	Japanese
Past: *While Sara was watching television, I left house.*	1	1	1
Past progressive: *While Sara was watch television, I was leaving the house.*	5	5	**1**

In Experiment 2, the complete/incomplete contexts refer to the final condition of the event dependent on the story as a whole, but the test sentences for the past and past progressive only refer to the final condition of the event within the time frame indicated by the *while*-clause. It is important to pay attention to this difference from Experiment 1, where both the complete/incomplete contexts and the past tense and past progressive test sentences refer to the final condition of the event within the story as a whole.

3.2.2. Experiment 2: results

In Experiment 2, generally both Arabic and Japanese speakers' results for the accomplishment verbs in the simple past were similar to the results of the native speakers. For the complete context, Arabic learners averaged 1.5, and Japanese learners averaged 2.2. These were relatively close to the native speakers, who averaged 1.8. For the incomplete context, both Arabic and Japanese learners averaged 2.1. These were similar to the native speaker results, which averaged at 1.7. These results show that both learner groups understand correctly that the past tense accomplishments entail completion, which conformed to our expectations.
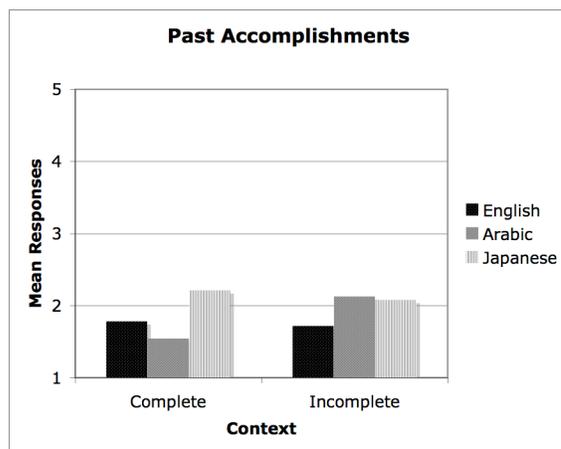
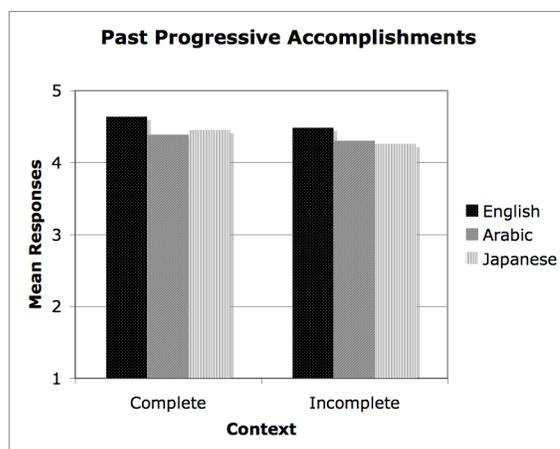**Figure 5:** Results for the Past Accomplishments for Arabic, Japanese, and English participants.

Results for past tense achievement verbs are shown in Figure 6. For the complete context, the Arabic group averaged a judgment score of 2.4, and the Japanese group averaged a score of 1.9, while the native speakers had an average of 2.2. These results show that both learner groups correctly rejected the past tense achievement verbs with complete contexts, which is what we expected. For the incomplete context, again both learner groups correctly rejected the past tense and patterned like native speakers. The Arabic group had an average of 1.6, and the Japanese group had an average of 1.3. The average for the native speaker group was 1.6. These results conformed to our expectations.
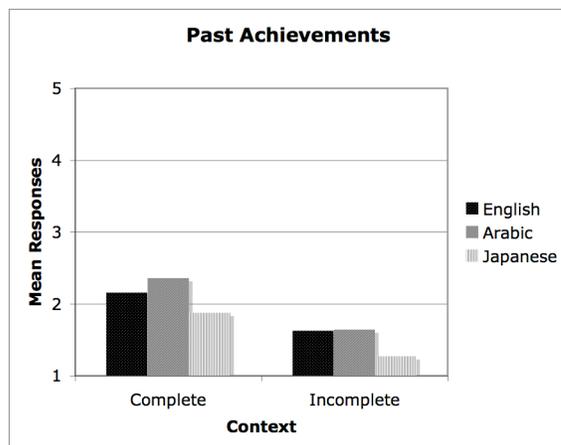
Figure 6: Results for the Past Achievements for Arabic, Japanese, and English participants.

Overall, results for the simple past indicate that both the Arabic and Japanese groups correctly understand accomplishment and achievement verbs in the simple past. Both learner groups correctly rejected the past tense with both complete contexts and incomplete contexts.

Figure 7 shows the results for the accomplishment verbs in the past progressive. All language groups correctly accepted the past progressive in complete contexts. The Arabic speakers' average judgment was 4.4, and the Japanese speakers' average judgment was 4.5, similar to the native speakers who averaged 4.6. These results matched our predictions. For the incomplete context, Arabic speakers averaged a judgment score of 4.3, and Japanese speakers averaged a judgment score of 4.3. These results were not significantly lower than the average judgment score for native speakers, 4.5. These results were not contradictory to our expectations. Because all three language groups behave similarly with respect to accomplishment verbs in the past progressive, we expected that both learner groups would pattern like native speakers. However, both learner groups were just slightly less willing to accept the past progressive accomplishment verbs with both complete and incomplete contexts.

Figure 7: Results for the Past Progressive Accomplishments for Arabic, Japanese, and English participants.

Figure 8 contains the results for the past progressive achievement verbs. For past progressive achievements in complete contexts, both learner groups were less willing to accept the verbs than the native speaker group. The native speaker group averaged 4.7, but the Arabic group averaged 3.6, and the Japanese group averaged 3.7.

These results were not expected for the Arabic group, because achievement verbs in the past progressive pattern similarly to English. On the other hand, the results for the Japanese group showed that they accepted the past progressive achievement verbs much more than we expected. For incomplete contexts, both Arabic and Japanese speakers did not perform similarly to native English speakers. Instead, Arabic and Japanese speakers both averaged 3.7, where the English native speakers accepted this context much more, averaging 4.5. The results for the Arabic group were not expected to be so low, and the results for the Japanese group were not expected to be so high.
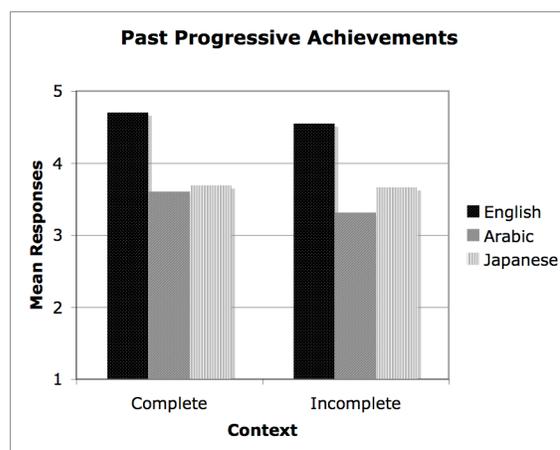
Figure 8: Results for the Past Progressive Achievements with for Arabic, Japanese, and English participants.

The results for Experiment 2 show that both learner groups did better on the simple past than the past progressive for both verb types. In this experiment, the past progressive achievement verbs were difficult for both learner groups. In terms of difficulty, we expected that only the Japanese group would show difficulty with the achievement verbs in the past progressive. However, we did not expect that the Arabic group would have difficulty with achievement verbs in the past progressive, since we expected them to behave like native speakers based on transfer.

These results are surprising, because we expected that the use of the temporal marker *while* would help cue the learner groups by giving them a time frame in which the action was taking place. Recall that in this Experiment 2, the complete/incomplete contexts referred to the final condition of the event dependent on the story as a whole, but the test sentences for the past and past progressive only referred to the final condition of the event within the time frame indicated by the *while*-clause. In Kazanina and Phillips (2006) this indication of an insider perspective of the event actually helped L1 Russian children correctly accept or reject the past progressive.

4. Conclusions and discussion

Experiment 1 indicated that both learner groups performed similarly to native speakers on the simple past and past progressive accomplishment verbs. However, both groups showed some difficulty with past progressive achievement verbs. An interesting point is the fact that all language groups were less willing to reject perfective verbs in ongoing contexts than in incomplete contexts. We saw that all three groups were less willing to reject the simple past accomplishment and achievement verbs in ongoing contexts than they were in incomplete contexts (Figures 1 and 2). We mentioned that one possible explanation for this might be due to the lexical category of the verb. Even if there is no explicit information denoting that an event has reached completion, because of the verb's telicity the learner may intuitively not want to reject it completely. By extending the likelihood of the event's completion into the near future, language groups may want to completely dismiss the simple past even in non-specified incomplete contexts (i.e. ongoing contexts). In Experiment 2 both language groups showed a clear command of the simple past with both verb types. However, the results of Experiment 2 indicate that *both* Arabic

and Japanese groups had difficulty with the past progressive achievement verbs. The results supported the predictions for both simple past and past progressive with accomplishment verbs. Learners performed at the same level as the native speakers in all contexts.

In general, an interesting patterned emerged for past progressive achievement verbs. The fact that within Experiment 1 both L2 learner groups had difficulty with the incomplete context, and that within Experiment 2 both L2 learner groups had trouble with the past progressive achievement verbs in both complete and incomplete contexts suggests that the incomplete context is difficult regardless of the L1. This shows that L2 learners might follow a similar developmental path as L1 children (van Hout, 2005; van Hout, 2006; Kazanina and Phillips, 2006). The results of this study were similar to those of several of the previous L1 and L2 studies. The imperfective seemed to present more of a challenge to the learners than the simple past. This was also the case in van Hout (2006) for the Polish and Dutch L1 learners. Like Wagner (2001), this study also showed that the past progressive was difficult for learners in incomplete contexts (Figure 4). The difficulty that the Arabic group had with the imperfective accomplishment verbs in incomplete contexts (Figure 7) and the imperfective achievement verbs in both complete and incomplete contexts (Figure 8) is congruent with the finding by Montrul and Slabakova (2002) that achievement verbs in the imperfective are difficult to acquire regardless of similarity between the L1 and L2. Although the results for the past progressive accomplishment verbs in Gabriele's (2005) study provided support that positive transfer supports acquisition, the low group to some extent associated the imperfective with complete contexts. Therefore, the notion that positive transfer facilitates acquisition was not fully supported. The results of this study also contradict the notion of positive transfer. The Arabic group actually had more difficulty than the Japanese group with past progressive accomplishments and past progressive achievements. It appears that imperfective aspect is a complex semantic language property and regardless of how it is instantiated in the L1, its acquisition presents a problem to the L2 learner. In the future, more advanced L2 learners should be tested in order to see whether or not the difficulties of imperfective aspect, particularly with past progressive achievement verbs, can eventually be overcome.

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Author contact information:

Erik Christensen: ecerikchristensen@gmail.com