

Is Native-like Competence Possible in L2 Acquisition?

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The question of ultimate attainment in second language acquisition has received considerable attention in the last two decades (see Birdsong 1999). This study investigates whether native speakers and non-native speakers differ in their degree of ultimate attainment, by looking at the acquisition of the aspectual interpretive properties of the Preterite and Imperfect past tenses in Spanish.

While an important body of research has investigated the emergence and development of tense/aspect morphology at initial stages of L2 development (see Bardovi-Harlig (1999) for an overview of recent research), very little is known about its ultimate attainment. Because this area of grammatical knowledge is quite complex and subtle, and not easily inducted from input, it represents an ideal testing case of near-native competence. Indeed, anecdotal accounts from a variety of L2 learners learning Romance languages suggests that the perfective/imperfective grammatical contrast is perhaps one of the most difficult areas of grammar to master. Seliger (1978) even claimed that tense and aspect, together with the distribution of some prepositions and articles tend to fossilize universally. Coppieters (1987), who tested knowledge of the *Imparfait/Passé Composé* distinction by French near-native speakers (among other structures), also concluded that native-like competence in the tense/aspect domain is *not* possible, and that this area of the grammar, which he assumed was *not* part of Universal Grammar, was subject to a critical period. Birdsong (1992) replicated Coppieters' study with other French near-native speakers by making methodological improvements, and contrary to Coppieters, found that many near-natives performed like native speakers. However, Birdsong did not test the perfective/imperfective aspectual contrast.

In this article we question Coppieters's and many others' claims on ultimate attainment. Starting from the premise that tense/aspect is part of Universal Grammar, we follow recent developments in theories of inflection and aspectual phenomena within a generative perspective (Giorgi & Pianesi, 1997), according to which grammatical aspect is instantiated in the functional category AspectP, situated between VP and TP in the clause structure, where the formal features [\pm perfective] are checked. This approach allows us to formulate precise research questions and hypotheses in the context of recent developments in linguistic theory and theories of impairment in L2 acquisition, such as the *Failed Functional Features Hypothesis* (FFFH) of Hawkins & Chan (1997). This hypothesis states that there is a critical period for the selection of parameterized formal features, but principles of UG remain available; formal features not

selected during the course of L1 acquisition become inaccessible to enter computations in L2 acquisition in adulthood; and L2 learners may use the morphology of the target language but with the features of their L1.

2. Interpretive Properties of the Preterite/Imperfect Contrast in Spanish

Tense and aspect are inflectional markers of temporality on the verb (Bybee, 1985; Comrie, 1976), which focus on different aspects of a situation. Tense is a deictic (referential) category relating situations to some external reference time (usually the moment of speaking), whereas aspect is concerned with the internal temporal structure of a situation as described by verbs and phrases (Comrie, 1976; Chung & Timberlake, 1985; Smith, 1991). Aspect is the property that makes it possible for a sentence to denote a complete or an incomplete event. It can be encoded in the lexical classes of verbs—lexical aspect—or it can be grammaticalized and marked by inflectional morphology on the verb, such as perfective or progressive morphemes.

Lexical aspect (also called *Aktionsart*, from German ‘kinds of action’) is a semantic property that depends on the meaning of the verb and properties of its internal argument and adjuncts. An event with an inherent endpoint is called **telic** and an event without inherent endpoint is called **atelic**. Telicity is partly the basis for the classification of verbs into Vendler’s (1967) four different aspectual categories, as shown in (1):

(1) states	<i>know</i>
activities	<i>run</i>
accomplishments	<i>run a mile</i>
achievements	<i>notice</i>

States, such as *know*, *be*, *love*, are properties that have no internal structure whatsoever. Activities (*Mary ran for hours*) are homogeneous processes going on in time without inherent goal. Accomplishments (*Mary ran a mile*) involve a process going on in time and an inherent culmination point. Finally, achievements (*The old man died*) have an inherent culminating point, but the process leading to that point is instantaneous. Activities and states are **atelic**, whereas accomplishments and achievements are **telic**.

Aspect is also expressed morphosyntactically on the verb, by perfective and imperfective tense morphemes to indicate “different ways of viewing the internal temporal constituency of a situation” (Comrie, 1976: p.3). This type of aspect is referred to as viewpoint aspect (Smith, 1991), and like lexical aspect, also makes reference to complete versus ongoing situations. **Boundedness** (Depraetere, 1995) describes the properties of grammatical aspect and refers to actual boundaries. Thus, **Perfective** aspect is **bounded**: it looks at the situation from outside, as having a beginning and end, but disregarding its internal structure (2a,b). On the other hand, **Imperfective** aspect is **unbounded**, looks at

the situation from inside, and is concerned with internal structure without specifying beginning or end of the situation (3a,b).

- (2) a. Laura built a house. (Simple Past- perfective-bounded)
 b. Laura construyó una casa. (Preterite-perfective-bounded)
- (3) a. Laura was building a house. (Past Prog.- imperf.-unbounded)
 b. Laura construía una casa. (Imperfect-imperfective-unbounded)

In Spanish and other Romance languages past tense morphology combines both tense and aspect. The bounded/unbounded aspectual distinction is realized by the inflectional morphology of the Preterite and Imperfect past tenses. Unlike the situation in English, this distinction is expressed independently of the opposition Progressive/Non-progressive. Thus, Preterite tense marks perfective aspect (boundedness) and the Imperfect tense signals imperfective aspect (unboundedness), as (2b) and (3b) illustrate.

While it is usually the case that atelic predicates (states and activities) combine naturally with the Imperfect tense, and telic predicates (accomplishments and achievements) are usually compatible with the Preterite, in Spanish all the aspectual classes of verbs can be expressed with Preterite and Imperfect, depending on what the speaker wants to convey. This is illustrated by the examples in (4) through (7).

- (4) El auto me costó/ costaba \$20.000 STATE
 The car to me cost (PRET)/ cost (IMPF) \$20.000.
 ‘The car cost me \$20,000.’
- (5) Juan durmió/ dormía en el sofá. ACTIVITY
 Juan slept (PRET)/ slept (IMPF) on the sofa.
 ‘Juan slept on the sofa.’
- (6) Juan corrió/ corría 5 kms. ACCOMPLISHMENT
 John ran (PRET)/ ran (IMPF) 5 kms.
 ‘John ran 5 kms.’
- (7) Juan alcanzó/# alcanzaba la cima. ACHIEVEMENT
 Juan reached (PRET)/ reached (IMPF) the top.
 ‘Juan reached the top.’

As noted by Giorgi & Pianesi (1997), achievement predicates in Romance are odd for some speakers (hence the symbol #) with the ‘present-in-the-past’ reading of the Imperfect, as (7) indicates. Because achievements have an inherent endpoint, they are incompatible with the unbounded interpretation of the Imperfect, unless there is a specific pragmatic context or adverbial that emphasizes the process leading to the result.

achievements). The feature value [–perfective] is simply not relevant in English. Only eventive predicates check the feature [+perfective] in AspP through Simple Past tense morphology, whereas stative predicates are neutral as to the perfective/imperfective contrast. Spanish and Italian do not associate the feature [+perfective] in the lexicon. The features [±perfective] are checked overtly through Preterite and Imperfect inflectional morphology. (For details of the analysis refer to Giorgi & Pianesi, 1997).

Assuming that the preceding analysis is correct for Spanish, the task of the English-speaking learner of Spanish involves recognizing that Spanish verbs are morphologically complex words not inherently associated with the feature [+perfective]. Furthermore, they need to learn the appropriate morphological distinction between Preterite and Imperfect tense morphology and to correctly map the formal features [+perfective] with Preterite morphophonology and [–perfective] with Imperfect morphophonology.

4. Hypotheses

If the acquisition of aspect is subject to a critical period, and if the restriction lies in the inability to access abstract features not instantiated in the L1, as the FFFH states, then even very advanced English-speaking learners of Spanish will be unable to acquire the [– perfective] feature of Spanish AspP leading to the following consequences:

- (1) success with eventive predicates, because they can rely on their knowledge of the progressive,
- (2) inability to distinguish between bounded and unbounded interpretations of Preterite and Imperfect with stative predicates.

5. Methodology

5.1. Participants

Twenty native speakers of Spanish from a variety of Spanish-speaking countries (Spain, Argentina, Colombia, Costa Rica and Mexico) (mean age 27.2) and 64 non-native speakers of Spanish whose first language was English participated in the study. Participants were recruited from among language instructors and professors in Spanish language programs at three major research universities in the United States. Their mean age was 29.13, and their mean age of first exposure to Spanish was 14.85, with a range of 12-24. Unlike the participants in the Coppeters (1987), Birdsong (1992), and White & Genesee (1996) studies, our non-native speakers *were not* living in a Spanish-speaking environment, but had daily contact with the Spanish language mainly through their work, and had had previous living experience in a Spanish-speaking country for extended periods of time, ranging from six months to ten years.

In order to independently assess the non-native speakers' proficiency in Spanish we used a proficiency test, adapted from the *Diploma de Español como Lengua Extranjera* (DELE) (Embajada de España, Washington D.C.). The test consisted of a cloze passage and a multiple choice vocabulary test. The

maximum possible score was 50. The test was administered to the native speakers and the non-native speakers. The native speakers performed at a minimum of 90% accuracy (45/50) in this task. We then applied the 45/50 minimum criterion as cut-off point to identify the most advanced non-native speakers in the sample. Of the 64 non-native speakers, 40 performed above 90% like the native speakers, and the remaining 24 participants who scored below 90% accuracy were classified as advanced learners.

In addition, all the non-native speakers were interviewed for ten minutes and were asked questions ranging from personal to hypothetical topics. The interviews were tape-recorded and independently judged for “nativeness” by two linguistically naïve native speaker judges, following similar procedures used by White & Genesee (1996) and Bongaerts (1999). We asked the judges to assign a score ranging from 1 = definitely non-native to 5 = definitely native, based on their overall impression of nativeness. The judges identified all the native speakers as native speakers, and assigned them a range of 3.5 to 5. All the non-native speakers whose scores fell within that range were also classified as “natives”. Of the 64 non-native speakers, 17 were classified as natives by both judges. These 17 speakers have also performed above the 90% criterion in the proficiency test. Based on the combined results of the proficiency test *and* of the oral interview, the non-native speakers were classified into three experimental groups: 24 advanced speakers, with proficiency scores below 90% and scores between 1-3 in the oral interview, 23 superior speakers, with proficiency scores above 90% but scores between 1-3 in the oral interview, and near-native speakers, with proficiency scores above 90% and oral interview scores between 3.5 and 5, like the native speakers. This information is summarized in Table 1.

Table 1: Experimental Groups According to the Proficiency Test and Oral Interview Scores

Tests		Natives (<i>n</i> = 20)	Near natives (<i>n</i> = 17)	Superior (<i>n</i> = 23)	Advanced (<i>n</i> = 24)
Proficiency Test (maximum 50)	<i>mean</i>	48.35	47.41	46.69	40.12
	<i>sd</i>	1.46	1.41	1.22	3.01
	<i>range</i>	45-50	45-49	45-49	33-44
Oral Interview (maximum 5)	<i>mean</i>	4.76	4.56	1.43	1.47
	<i>sd</i>	0.49	0.55	1.09	0.84
	<i>range</i>	3.5-5	3.5-5	1-3	1-3

A one-way ANOVA performed on the proficiency scores revealed significant differences between the groups ($F(3,80) = 80.563, p = .0001$). The native speakers and the near-natives were no different from each other (Tukey, $p = .481$), but the native group was different from the superior ($p = .038$) and the advanced ($p = .0001$) groups. An ANOVA on the interview scores was also

significant ($F(3,80) = 102.503, p = .0001$). The scores of the near-natives and the control group were significantly different from those of the superior and advanced groups.

5.2. Test Instruments

Two tasks were especially designed to test the acquisition of the morphological and semantic properties of aspectual tenses in Spanish. The first task was a *morphology recognition task*, which tested knowledge of the Preterite/Imperfect morphology with different aspectual classes of verbs. Participants had to select from two options the correct form of the verb in the past (see Montrul & Slabakova (submitted) for an example). The choice of verbs was balanced among the four different lexical classes and there were 15 expected responses for the Preterite and 15 for the Imperfect.

The second test instrument was a *sentence conjunction judgment task* that tested the semantic implications of the Preterite and Imperfect tenses. Subjects were presented with a list of sentences consisting of two coordinated clauses. Some of the combinations made sense, while others were contradictory. Subjects had to judge on a scale ranging from -2 (illogical) to 2 (logical) whether the two clauses made sense together. We included minimal pairs in which the Imperfect tense in the first clause made the sentence logical, while the Preterite made it illogical. (14) and (15) are examples with a stative verb.

- (14) La clase **era** (imperf) a las 10 pero empezó a las 10:30. (logical)
The class was at 10 but started at 10:30.
- (15) La clase **fue** (pret) a las 10 pero empezó a las 10:30. (illogical)
The class was at 10 but started at 10:30.

The test consisted of a total of 56 sentences (28 logical and 28 illogical). There were 14 sentences with accomplishment verbs, 14 with achievement and 14 with stative verbs. There were no activity predicates included in this task because they were odd with both tenses and did not fit the design of the test. In each class, 7 verbs appeared in the Preterite and 7 in the Imperfect tense. The test also included 14 distractor sentences (7 logical and 7 illogical) using Preterite, Imperfect, and other tenses.

5.3. Results

The scores of the morphology recognition task in Table 2 demonstrate that all the groups performed well above 90% accuracy on this test, and that the range of scores of the near-native speakers are identical to those of the native speakers. A one-way ANOVA showed significant differences between the four groups ($F(3,80) = 3.69, p = .015$). The difference was between the near-native speakers, who performed higher than the native speakers, and the near-native speakers and advanced learners (Tukey, $p = .019$).

Table 2: Scores on the Morphology Recognition Task (maximum 30)

	Natives (n =20)	Near natives (n = 17)	Superior (n = 23)	Advanced (n =24)
<i>mean</i>	28.95	29.29	28.30	27.33
<i>sd</i>	1.05	.98	3.08	2.03
<i>range</i>	27-30	27-30	23-30	21-30

The Sentence Conjunction Judgment Task tested knowledge of the bounded/unbounded interpretations of perfective and imperfective morphology with accomplishment, achievement and stative verbs. Mean scalar responses were submitted to a factorial analysis of variance with repeated measures. Overall results revealed significant main effects for Group ($F(3,80) = 21.848$, $p = .0001$), Tense ($F(1,83) = 772.446$, $p = .0001$) and Verb ($F(2, 82) = 62.65$, $p = .0001$) and all interactions were significant at the .05 level.

Figure 1 shows the mean responses for accomplishments predicates (*Los González #vendieron/vendían la casa pero nadie la compró* “The González #sold/were selling the house but nobody bought it”). For all the groups, there was a statistically significant contrast between Preterite and Imperfect ($F(3,80) = 690.926$, $p = .0001$), indicating that all groups know the bounded/unbounded semantic contrast between the two tenses with accomplishment predicates. There were no statistical differences between the groups with Preterite or Imperfect sentence types ($F(3,80) = 1.324$, $p = .272$). Thus all non-native speakers performed like native speakers.

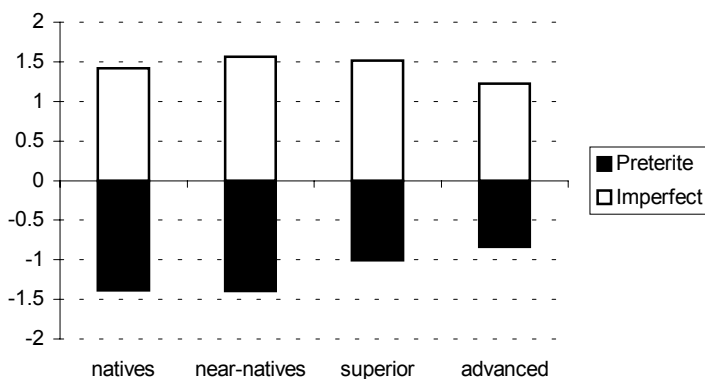


Figure 1. Mean Responses on Accomplishments

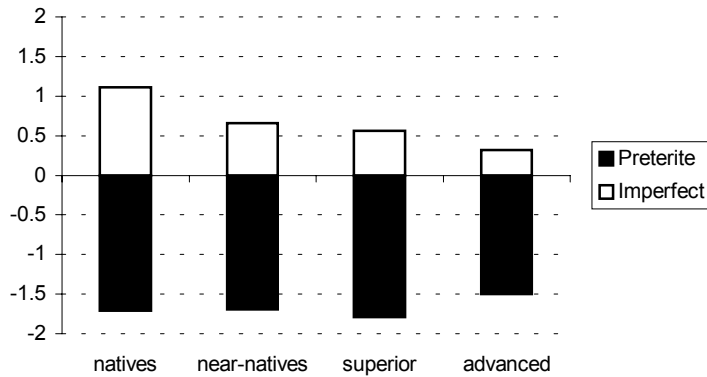


Figure 2: Mean Responses on Achievements

The responses for achievements in the Imperfect received lower numerical ratings than those of the Preterite, and this trend was expected because achievements in the Imperfect can sound odd for some speakers if an appropriate context is not provided (*Jorge corría/#corrió la carrera pero al final no participó* “Jorge was running/ran the race but in the end he did not participate”). However, there was still a significant contrast between the two tenses for all groups ($F(3,80) = 524.054, p = .00001$). There were no significant differences among groups for the sentences in the Preterite ($F(3,80) = 1.702, p = .173$), but the mean response of the advanced group differed significantly from that of the native speakers with the sentences in the Imperfect ($F(3,80) = 3.59, p = .017$). In short, superior and near-natives performed like native speakers.

Finally, Figure 3 shows the mean scores for stative predicates (*La clase era/#fue a las 10 pero empezó a las 10:30* “The class was at 10 but started at 10:30”). As with all other sentences, there was a significant main effect for tense ($F(3,80) = 349.103, p = .00001$), but there was a significant main effect for group ($F(3,80) = 4.73, p = .027$) and a group by tense interaction ($F(3,80) = 14.017, p = .00001$). A one-way ANOVA run with states in the Imperfect, and a post-hoc Tukey procedure, indicated differences between the native speakers and the advanced group ($p = .0001$), the native speakers and the superior group ($p = .0001$), but crucially no differences between the native speakers and the near-natives ($p = .470$). The means of stative verbs in the Preterite were also different among groups ($F(3,80) = 7.798, p = .0001$), mainly due to the performance of the advanced group, which was significantly less accurate than the native speakers ($p = .0001$) and the near-native speakers ($p = .0001$).

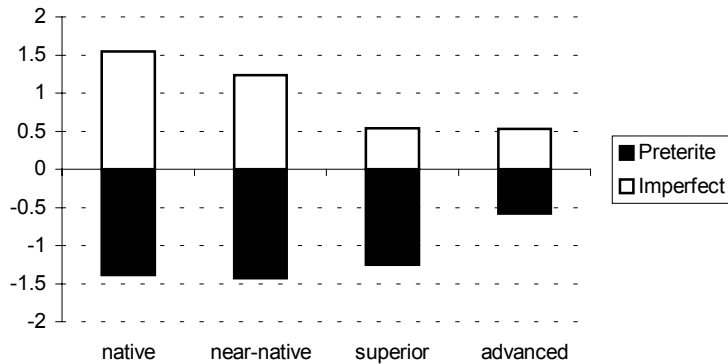


Figure 3: Mean Responses on States

To summarize, group results indicate that the near-native speakers performed like native speakers with all predicates in the sentence conjunction task, since there were no statistically significant differences among these groups. The only difference between the superior group and the native speakers was detected with stative verbs in the Imperfect. When statistical differences were found, these were due to the lower performance of the advanced group, especially with state and achievement predicates in the Imperfect.

However, the main aim of this study was to find out whether individual learners *can* achieve native-like knowledge, and show performance on this task comparable to the performance of native speakers. We thus focus here on an analysis of individual learners' and native speakers' scores. In these analyses, we adopted the procedure used by Flege et al. (1995) and Bongaerts (1999) in their investigations of the acquisition of native-like phonology and pronunciation. All mean scores of individual native speakers were standardized (i.e., converted to z-scores). Most z-scores fell within less than 2 standard deviations from the mean, with a few exceptions. In order to identify potential non-native speakers falling within the range of variation of native speakers (below 2 standard deviations from the native-speakers' means), we created a new variable z , by applying the following formula: $z=(x-m)/s$, where x is the original data value, and m and s are the sample mean and standard deviation in the native-speaker group. Unfortunately, due to space limitations we cannot show these scores in detail. Interested readers are referred to Montrul & Slabakova (submitted) for all the details.

We found 12 near-native speakers out of 17 (70.5%) who performed like native speakers, 6 superior speakers (26.08%) and 3 advanced speakers (12.5%) who met the criteria as well. The advanced and superior speakers displayed most variation with stative predicates in the Imperfect, as predicted.

6. Discussion and Conclusion

The present study was able to establish that near-native competence in the domain of aspectual interpretations is attainable, even in individuals who are not totally immersed in the language. While this area of grammar is certainly difficult to acquire, our results suggest that it is not universally subject to a critical period. Results showed that the near-native speaker group was not statistically different from the native speakers. Individual results allowed us to identify 12 near-natives, 6 superior and 3 advanced subjects who performed like native speakers with ALL sentences in the main task. None of the predictions based on the *Failed Functional Features Hypothesis* were confirmed for the majority of the subjects in the near-native group or for the successful subjects identified in the two other groups, although they were supported to a certain extent with all the other learners. However, it could be claimed those unsuccessful learners have not yet reached their final state of L2 acquisition. Our results suggest that universal features of functional categories not selected by a given language in early childhood remain accessible in adulthood when learning a second language.

While we do not deny the common observation that many language learners have systematic difficulties with the perfective/imperfective opposition in Romance languages, as many of our subjects demonstrated, to claim that this area of grammar fossilizes universally and is subject to a critical period is perhaps too strong in the light of our results. Nor do we intend to deny that there are critical periods in SLA altogether, or that UG somehow decays with age in some other areas. Quite simply, we have not been able to document those claims in this study. Our results are compatible with those of Birdsong (1992), Bongaerts (1999), Bruhn de Garavito (1999), and White & Genesee (1996), among others, who were also able to document quite a few successful individuals.

Finally, we acknowledge that our results are also limited in a number of ways. First, we tested a single L1 group and we concentrated on one specific grammatical domain. Second, our subjects were mostly teachers. These factors, admittedly, limit the generalizability of the results beyond the sample of speakers tested in this experiment. What remains an open question for future investigation, therefore, is whether non-native speakers from other language backgrounds, who are not language teachers, and who have mainly learnt Spanish naturalistically, can also perform in these tasks like native speakers.

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