Testing the Predictions of the Feature Assembly Hypothesis
Evidence from the L2 Acquisition of
Spanish Aspect Morphology

Laura Domínguez, María J. Arche, and Florence Myles

1. The role of formal features in second language acquisition

According to the Minimalist Program (Chomsky 1995, 1998, 2000) the Faculty of Language comprises a universal computational system (CH_L) and a lexicon (LEX) which contains lexical items constructed from well-defined matrices of (formal, phonological and semantic) features (F). Such features are part of a universal inventory, made available by Universal Grammar, which can be accessed during the process of acquiring a first language. How features are configured within each matrix is nontrivial as this contains relevant information for the construction of linguistic expressions (the result of computational operations of CH_L, such as Merge, accessing the assembled lexical items).

In recent work (Chomsky 2000, 2001, 2004), acquiring a (first) language is characterised as including two equally relevant processes: feature selection (selection of a subset $[F_{L1}]$ of F) and feature assembly (assembly of features of $[F_{L1}]$ into particular lexical items $[Lex_{L1}]$). Chomsky characterises these as one-time processes (only available whilst the language-specific feature specifications are selected in each language), triggered by exposure to the available linguistic input which results in each language selecting a particular $[F_{L1}]$ and assembling a particular $[Lex_{L1}]$. Parametric differences between languages can then be said to be determined by differences in both the features selected and how these are specifically assembled onto functional categories and lexical items.

(1) Language Acquisition = (Feature Selection + Feature Assembly)

Feature Selection: $F \xrightarrow{CH_L} [F_{L1}]$

Feature Assembly: $[F_{L1}] \longrightarrow [Lex_{L1}]$

It is not completely clear whether access to the universal inventory of features is still readily available once a language has selected its specific subset [F_{L1}] of F. This prompts the question of whether L2 speakers can ever be successful in acquiring a grammar which contains features which are not selected by their native language.

Generative second language research has examined to what extent cross-linguistic differences regarding the features selected by each language [[F_{L1}], [F_{L2}] [F_{L3}]…] constitute a source of interlanguage variability and permanent impairment for second language speakers (Hawkins and Chan 1997, Hawkins 2005, Tsimpli 2003, Franceschina 2004, Lardiere 2006, 2009 among others). Recent accounts of persistent problems in L2 acquisition comprise two different views, those who locate the deficit in the computational system itself (because of the impossibility of acquiring new L2 features after the critical period) (e.g. Hawkins and Chan 1997, Tsimpli 2003, Hawkins and Liszka 2003, Tsimpli and Mastropavlou, 2007, Tsimpli and Dimitrakopoulou (2007)), and those who locate the deficit at the level of mapping of syntactic knowledge onto other grammatical domains (morphology and phonology in particular) (Prévost and White 2000, Lardiere 1998a, b, 2000, and Goad and White 2004). Interestingly, the latter allows for the possibility of a deviant grammar even if knowledge of the target (uninterpretable) features is not impaired[1]. This scenario makes it possible that acquiring the target [Lex_{L2}] (and not [F_{L2}]) might be the source of attested problems in L2 acquisition.

Recently, Lardiere (2005, 2008, 2009) as well as Choi and Lardiere (2006a) have formalised such a possibility in the Feature-Assembly Hypothesis (FAH). This approach presupposes that successful L2 acquisition is determined by the reassembling of features of the L2 which already exist in the L1 into new functional categories and lexical items. Consequently, convergence depends on whether L1 features have the same morpholexical expressions in the L2 and whether learners can effectively reconfigure them when they do not. If certain problems in acquisition are then external to the computation system, the question of whether divergence in L2 grammars can properly be accounted for by a feature accessibility account needs to be seriously examined using a variety of grammatical structures as evidence.

This paper examines the validity and predictive power of the feature-assembly account by providing evidence from the L2 acquisition of Spanish imperfect (Arche, Domínguez and Myles (2010a) and Domínguez, Arche and Myles (2010b)), a well-documented area of difficulty for L2 speakers. This is an appropriate area to examine the role of feature assembly in acquisition as knowledge of aspectual distinctions in Spanish requires native speakers of English to remap semantic concepts regarding the temporal status of events onto new morphological configurations (Slabakova and Montrul 2002, Montrul and Slabakova 2003).

---

[1] Hawkins (2005) argues that apparently targetlike grammars can be impaired as well.

2. Defining the Learning Task in Language Acquisition

Feature Selection $[F_{L1}]$ and Feature Assembly $[LEX_{L1}]$ in child language acquisition are natural processes triggered by exposure to primary linguistic data (PLD). Whether these processes can be replicated multiple times during a person's lifespan, upon exposure to new PLD, is a matter of debate. Likewise, generative SLA research does not agree on whether feature assembly is a necessary process in the L2 acquisition process, and whether feature selection alone can explain divergence in non-native grammars. In abstract terms, two possible learning scenarios (represented by hypotheses 1 and 2 below) are possible:

- H1: Learnability problems in L2 acquisition are determined by the (im)possibility of selecting new features ($[F_{L1}] \rightarrow [F_{L2}]$)
- H2: Learnability problems in L2 acquisition are determined by the (im)possibility of reassembling existing features into new configurations (i.e. $[F_{L1}] \rightarrow [F_{L2}]$ and $[LEX_{L1}] \rightarrow [LEX_{L2}]$)

According to H1 variability and divergence in second language acquisition are the result of the inability of accessing features of $[F_{L2}]$ which are not already in $[F_{L1}]$ as the result of the critical period. For instance, Franceschina (2005: 33-34) supports this point by stating the following when discussing the acquisition of parameterized functional features (PFF): *"Parametric differences between languages are taken to be differences in PFF composition in [F]. It follows that there will always be a difference in PFF composition between [F]$_{L1}$ and [F]$_{L2}$ (i.e. [F]$_{L2}$ − [F]$_{L1}$ ≠ Ø). Given my assumption that adult L2 grammar building is limited to the representational resources in F_{L1} and taking into account that [F]$_{L2}$ − [F]$_{L1}$ = at least 1, it follows that F[$_{L1}$] will always be insufficient to build the grammar of an L2 in the way that a child L1 learner does so, as there will always be at least one PFF needed for building the L2 in a nativelike way missing from [F]$_{L1}$,"*

In contrast, H2 regards variability and divergence as the result of the inability to reassemble the subset of features in $[F_{L2}]$ which also exist in the L1 but are configured in a different manner. Lardiere (2008:235) illustrates this point when she explains that *"...acquiring an L2 grammar is not just a matter of learners determining whether features are still available for selection from a universal inventory and are, in fact, selected. In particular, we need to consider how they are assembled or bundled together into lexical items (or functional categories), and then we must further consider the particular language-specific conditions under which they are phonologically realized."*

Most recent L2 language acquisition accounts are based on hypothesis 1 as they regard the learning task to be determined, in some way or other, by whether features of the L2 are present in the L1 or not. However, if parametric differences among languages are also determined by how formal features are

configured in each language it seems obvious that SLA research should also consider the possibility that hypothesis H2 (which takes into account differences in how features are assembled in each language) may be correct.

The following sub-sections contrast these two hypotheses in more detail by considering two hypothetical languages $[F_{L1}]$ and $[F_{L2}]$ which have selected the following sets of features:

(2) $[F_{L1}]$ = (F1, F2, **F3, F4, F5**, F6, F7)
        $[F_{L2}]$ = (**F3, F4, F5**, F8, F9, F10)

Some of the features are exclusive to F_{L1} (e.g. F1, F2, F6, F7), some are exclusive to F_{L2} (e.g. F8, F9, F10) and some are shared by the two languages (e.g. F3, F4, F5). The question each hypothesis addresses is which subset of $[F_{L2}]$ will be fully acquired by a native speaker of $[F_{L1}]$.

2.1 Hypothesis 1 (Feature selection: $[F_{L1}] \rightarrow [F_{L2}]$)

In this hypothesis only feature selection (and not whether features are assembled in a different manner) is considered. According to this hypothesis convergence depends on existing similarities and discrepancies between the features selected in the native $[F_{L1}]$ and target $[F_{L2}]$ grammars. Taking this into consideration two scenarios can be entertained (see table and diagram below). In Scenario A full convergence is expected for all features, including those which are not instantiated in the L1. The Full Transfer/Full Access Hypothesis (Schwartz and Sprouse 1994,1996) where all L2 features, even if they are new, can be successfully acquired represents this possibility. In contrast, in scenario B (e.g. the Representational Deficit Hypothesis (Hawkins 2003; Hawkins and Hattori 2006) or the Interpretability Hypothesis (Tsimpli 2003)) access to the universal inventory of features is subject to a critical period which implies that not all of the L2 features may be successfully acquired. This means that the subset of $[F_{L2}]$ which is not present in the L1 cannot be acquired; that is, convergence is only expected for those features of the L2 which are a subset of the L1 ($[F_{Ln}] \subset [F_{L2}]$) (where $[F_{Ln}]$ is the expected final state of the learned F). The expected final grammar only contains those features which are selected in both languages ($[F_{L2}] \cap [F_{L1}]$) (see Fig 1).

Table 1. Expected outcome for Hypothesis 1

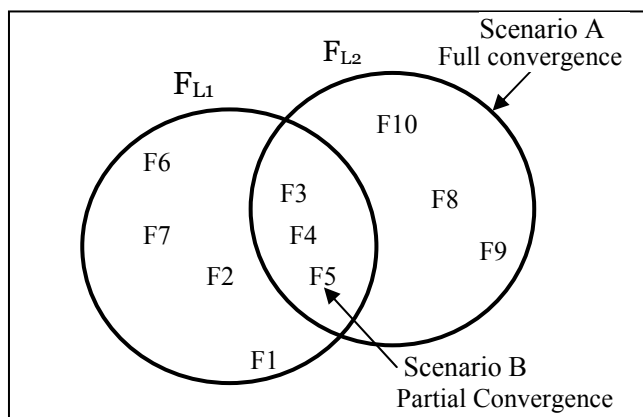|	Initial State	Final State	Convergence
Scenario A	$[F_{L1}]$	$[F_{Ln}] = [F_{L2}]$	Full: (i.e. $[F_{Ln}]$ = F3, F4, F5, F8, F9, F10)
Scenario B	$[F_{L1}]$	$[F_{Ln}] = [F_{L2}] \cap [F_{L1}]$	Partial: $[F_{Ln}] \subset [F_{L2}]$ (i.e. $[F_{Ln}]$ = F3, F4, F5)

Fig. 1.Distribution of formal features in two languages

2.2. Hypothesis 2 (feature selection and feature assembly: $[F_{L1}] \rightarrow [F_{L2}]$ and $[LEX_{L1}] \rightarrow [LEX_{L2}]$)

This hypothesis, (Cf. FAH (Lardiere 2008, 2009)), includes both feature selection (as hypothesised by Scenario A in particular) and feature assembly in the learning task. The characterisation for each language has been modified to account for the fact that each feature has also been assembled in a particular way (i.e. 'a' and 'b' represent two possible ways in which each of the features can be configured):

(3) $[F_{L1}]$ and $[Lex_{L1}]$ = (F1a, F2a, **F3a, F4a, F5b**, F6b, F7b)
 $[F_{L2}]$ and $[Lex_{L2}]$ = (**F3a, F4b, F5a**, F8a, F9b, F10a)

As a result, we see how differences between these two languages affect not only what particular features are selected but how they are assembled as well. Under this analysis, the learnability problem is determined not by the selection of new features (full convergence is expected for all features) but by the need to reconfigure features selected by both languages into new language-specific lexical items (Lardiere 2009:187). The subset of features common to both $[Lex_{L1}]$ and $[Lex_{L2}]$ may (i.e. Scenario A2) or may not (i.e. Scenario A1) need to be reassembled into new lexical items. Influenced by how the same features are

configured in their native languages, L2 speakers may find it persistently problematic to assign a new configuration (as in the L2) to a feature which already exists in F_{L1} and as a result full convergence may not be achieved (as shown by [LEX_{Ln}], the expected final state of the learned LEX).

Table 2. Expected Outcomes for Hypothesis 2 (for features which exist in both F_{L1} and F_{L2})

	Initial State	Final State	Convergence
Scenario A.1= Same F, same LEX (e.g. F3)	[F_{L1}] + [LEX_{L1}]	[F_{Ln}]+[LEX_{Ln}]= [F_{L2}] + [LEX_{L2}]	Full
Scenario A.2= Same F, different LEX (e.g. F4, F5)	[F_{L1}] + [$_{LEXL1}$]	[F_{Ln}]+[LEX_{Ln}]= [F_{L2}] + [LEX_{L1}?]	Not necessarily

A refinement of Fig.1 now taken into consideration how each feature is configured in each language is shown in Fig.2:
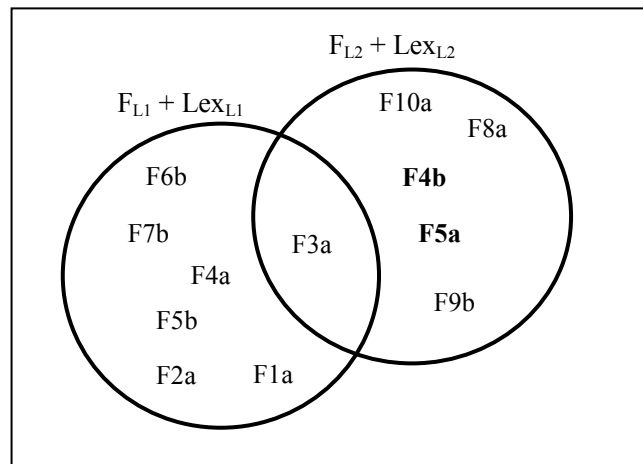

Fig.2. Distribution of assembled features in two languages

Features F1 and F2 are not problematic because they are not selected in the L2. Features F8, F9 and F10, which only exist in the L2 are also not problematic because they do not need reassembling[2]. The interesting features are those which

---

[2] We are assuming, following Lardiere (2009), that positive evidence will allow learners to acquire the whole set of L2 features even if these are not present in the L1, although this is still a contentious issue. See Section 5 for more details.

exist in both languages but not necessarily with the same configuration (F3, F4, F5). Feature F3 exists in both language with the same configuration (as shown by scenario A1) so no reassembling is needed and it will be successfully acquired. In contrast, although features F4 and F5 exist in both languages they are configured differently and will need to be reassembled (as shown in scenario A2). According to hypothesis 2 (and in contrast to hypothesis 1) these are the features which may be the source of variability and divergence even at the endstate. This hypothesis will be tested in the context of the L2 acquisition of Spanish aspect by native English speakers as explained in the next section.

3. Spanish aspectual morphology

Aspect is a semantic category conveying information about the temporal development of an eventuality (whether it is in progress, finished or about to start) and about the number of occasions that the eventuality has been instantiated (either once or more than once) (Comrie 1976, Smith 1991, Verkuyl 1993, Demirdache and Uribe-Etxebarria 2000, Arche 2006). These properties are grammaticalised in aspect forms known as perfective when referring to finished (bounded) eventualities, and imperfective when referring to unfinished (unbounded) ones. As shown in table 3, whereas perfective events are interpreted as finished, the imperfect can have three different meanings according to the number of occasions in each event (Arche 2006).

Table.3. Relevant properties of perfective and imperfective aspect

Meaning	Number occasions	Status	Examples
Perfective	1	Finished	He was sick all day El **estuvo** enfermo todo el dia
(Imperfect) Continuous	∃	Unfinished	He was sick when I saw him El **estaba** enfermo cuando lo vi
(Imperfect) Habitual	>1	Period unfinished. Each instance finished	He used to walk in the park El **caminaba** por el parque
(Imperfect) Progressive	1	Unfinished	He was walking in the park El **caminaba** por el parque

Cross-linguistic differences are observed with respect to how these aspectual features, (i.e. the number of occasions and the finished/unfinished status of eventualities), are expressed. For instance, the table above shows how Spanish uses the same morphological means to express the three meanings of

the imperfect (continuous, habitual and progressive), while English makes use of the past tense for the continuous meaning and periphrases for the habitual and the progressive[3]. Crucially, while English uses the same past form for both perfective and imperfective (continuous) events, Spanish draws a consistent morphological contrast between the finished/unfinished status of eventualities.

Note that, under this analysis, aspectual syntactic and semantic content is assumed to be the same across languages whereas its morphological expression is language-specific. Accordingly, the formal features associated with the aspectual distinctions shown in table 3 are the same in both languages and the differences between these two languages are determined by which specific morphological configuration is selected for each aspectual meaning. For this reason, when acquiring the Spanish aspectual morphology, English speakers will have to learn that the distribution of correspondences between forms and meanings differ in these two languages and that, in particular for this study, the same form (past tense) cannot be used to express both finished and unfinished (continuous) meanings in the L2. We argue that the differences in how aspect is represented in these two languages need to take into account how the various meanings associated with the different features are mapped onto morphological forms in the two languages rather than merely whether the features themselves are selected in both languages.

This specific characterisation of the learning task is particularly relevant since an account based on the selection of features only (i.e. Hypothesis 1) would predict no differences in the acquisition of the three meanings associated with the imperfect in Spanish, whereas the continuous meaning, requiring reconfiguration, will be more difficult to acquire if feature reassembly is assumed to be part of the learning task. We can formalise these predictions as follows:

- P1: If the learning task for L1 English speakers of Spanish only involves the selection of particular aspectual features (i.e. $[F_{L1}] \rightarrow [F_{L2}]$), no differences in the acquisition of the three meanings associated with the imperfect are predicted.
- P2: If the learning task for L1 English speakers of Spanish involves feature assembly (i.e. $[F_{L1}] \rightarrow [F_{L2}] + [LEX_{L1}] \rightarrow [LEX_{L2}]$) the continuous meaning (the only meaning requiring re-assembly) will be a source of problems for L2 speakers.

4. Examining feature-reassembly in the L2 acquisition of aspect

The aim of the study presented in Arche, Domínguez, Myles (2010) and Domínguez, Arche, Myles (2010) was to investigate the L2 acquisition of the

---

[3] We leave aside the discussion as to whether the past tense form can be interpreted as habitual with event verbs (e.g. walk) as well.

Spanish imperfect, focusing on the three interpretations encoded by Spanish imperfective morphology (continuous, habitual and progressive). Sixty L1 English learners of Spanish (20 beginners, 20 intermediate and 20 advanced) and 15 native speakers completed a context/sentence matching task.

Table. 4. Participants

Group	Typical Age	Proficiency Level
Y10 (n=20)	14-15	Beginners (c200 hrs instruction)
Y13 (n=20)	17-18	Intermediate (c500 hrs instruction)
Undergraduates (n=20)	21-23	Advanced (Spanish majors)
Native Speakers (n=15)	14-28	N/A

The eighty-five participants were asked to rate the appropriateness of a pair of (imperfect/preterit) sentences in 32 contexts using a 5 point Likert scale (-2, -1, 0, +1, +2). Each context was carefully designed to bias the sentence with perfective morphology (contexts depicting a one-off event) or the sentence with imperfective morphology (contexts depicting continuous, habitual, or progressive actions). Example (4) illustrates a sample test item where the introductory context represents a habitual action. Sentence (b) with imperfective morphology is appropriate in this context:

(4)   When Ana was a child she had a very close friend, Amy, and she liked to spend a lot of time at her house after school.

   (a)   Ana **estuvo**$_{pret}$ mucho en casa de Amy al salir del colegio (inappropriate)
          "Ana was in Amy's house a lot after getting off school"

   (b)   Ana **estaba**$_{imp}$ mucho en casa de Amy al salir del colegio (appropriate)

The results of the study confirm the prediction that the continuous, the only meaning requiring reassembly, is problematic even for advanced speakers. In this respect, the only significant difference in the choice patterns between natives and advanced learners was found with respect to the continuous meaning (p=0.001). Figure 3 shows how the overall means of correct answers (both correct acceptance of imperfect and correct rejection of preterit increase with

proficiency across all contexts and how the least number of appropriate scores are found in continuous contexts.
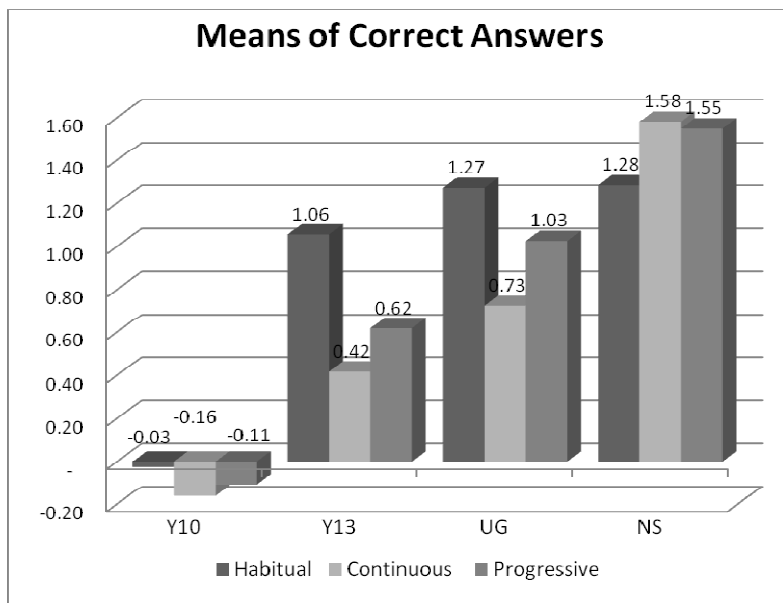

Fig.3. Means of correct answers in three semantic contexts

Separate results for the correct acceptance of sentences with imperfect verbal morphology and the correct rejection of sentences with perfective morphology[4] are shown in Figures 4 and 5 respectively. These reveal how advanced learners behave in a nativelike manner (regarding all three meanings) in accepting the sentences with imperfective morphology[5] but they are still behaving significantly differently from natives when rejecting the preterit. This indicates that learners seem to have more problems abandoning the past tense morphology (which is the semantic-morphology association in their L1 for this meaning) in continuous contexts than accepting a new morphological form (imperfect) for these contexts.

---

[4] Results for one-off contexts, in which sentences with perfective morphology are appropriate, are not discussed here.

[5] Tukey post-hoc tests show no statistical differences between the advanced and native groups for any of the meanings (p=0.071 for the continuous, p=0.284 for the progressive and p= 0.004 for the habitual) for answers where the imperfect had to be selected. In contrast, the difference between these two groups was significant in continuous contexts and for answers that required the preterit to be rejected (p= <0.001).
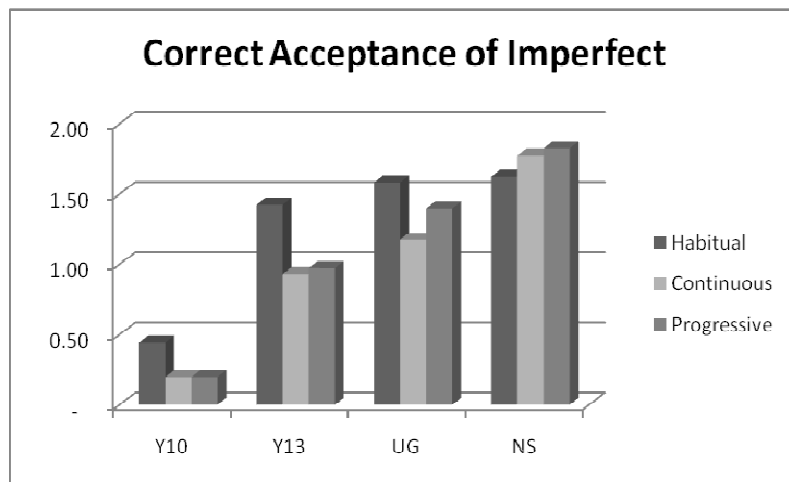
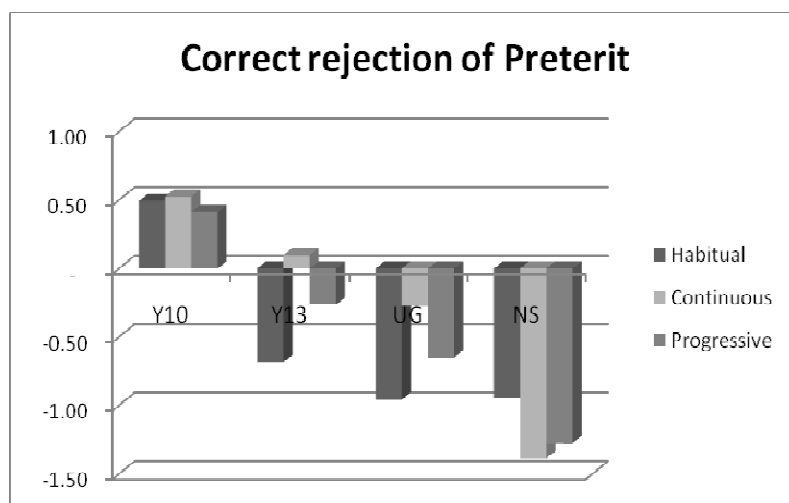**Fig.4. Means of correct acceptance of the imperfect**

Fig.5 Means of correct rejection of the preterit.

Overall, the results are consistent with the claim that problems with the imperfect are selective and do not equally affect the acquisition of this form in all three contexts. The meaning which needs semantics-morphology remapping (i.e. the continuous) seems to be the most problematic meaning[6]. P2 is therefore

---

[6] One remaining question concerns why learners show lower scores for the progressive meaning than for the habitual. It is possible that the differences between the progressive

supported. We argue that this result can be better explained by the differences in the way that the native and the target grammars express each of the three aspectual meanings morphologically than by the availability of a particular syntactic feature. We also argue that these results, and in particular the results of the advanced group, are difficult to explain by a feature-selection account since the continuous meaning, which receives significantly lower scores, is also available in the learners' L1. The persistent problems observed in the advanced group do not seem to be determined by feature selection (use of two out of three meanings associated with the imperfect are targetlike) but by whether features are assembled into morphological configurations in a different way in both languages.

5. Conclusions and implications for future research

The discussion of the results presented in the previous section points to two main conclusions. First, feature re-assembly (a necessary process during the course of acquiring a second language), can be a source of persistent difficulty for second language speakers. In the case of the present study, success in the acquisition of Spanish aspectual morphology seems to be determined by whether features need to be reconfigured to accommodate the target grammar. Second, a hypothesis, such as the FAH, which takes into account the specific morphological expression of aspect-related formal features, makes appropriate predictions in the acquisition of Spanish aspectual morphology. In particular, it can account for the asymmetry observed in the acquisition of the three meanings associated with Spanish imperfect morphology and provide a fine-grained explanation of divergence in this grammatical domain.

One remaining question not addressed by this study and which requires further examining is whether feature selection is always successful (as assumed by the FAH) or whether this process can be a source of problems in acquisition as well (i.e. scenario B under hypothesis 1). We leave it for future research to examine whether this is indeed the case.

References

Arche, María J. 2006. *Individuals in Time. Tense, Aspect and the individual/stage distinction*. Amsterdam/Philadelphia: John Benjamins.

Arche, María J., Dominguez, Laura, and Myles, Florence. 2010. The L2 acquisition of the semantics and morphology of Aspect: a study of the acquisition of the Spanish imperfect-preterit contrast by native speakers of English. Presented at the *Workshop on Tense and Aspect in Generative Grammar: Typology and Acquisition*. Lisbon, (Portugal) 1-2 July.

---

and continuous meanings may not be considerable enough to be detected by the test used in this study. This seems to be supported by the fact that the pattern of responses for these two meanings are not significant (p=0.761) for the native controls either. We intend to further examine this issue in future research.

Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.

Chomsky, Noam 1998. Minimalist inquiries: the framework. *MIT working papers in linguistics*. Cambridge, MA: MITWPL, 15, 1–56.

Chomsky, Noam. 2000. *New horizons in the study of language and mind. Cambridge*, U.K. ; New York: Cambridge University Press.

Chomsky, Noam. 2001. Derivation by Phase. In *Ken Hale: A Life in Language*, ed. Michael Kenstowicz, 1- 52. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2004. Beyond Explanatory Adequacy. In *Structures and Beyond. The Cartography of Syntactic Structures*, ed. Adriana Belletti, 104 – 131. Oxford: Oxford University Press.

Choi, Myong-hee and Lardiere, Donna. 2006a: The interpretation of wh-in-situ in Korean second language acquisition. In Belletti, A., Bennati, E., Chesi, C., DiDomenico, E. and Ferrari, I., editors, *Language acquisition and development: Proceedings of GALA 2005*. Cambridge Scholars Press, 125–35.

Comrie, Bernard. 1976. *Aspect. An Introduction to the Study of Verbal Aspect and Related Problems.* Cambridge: Cambridge University Press.

Demirdache, Hamida and Uribe-Etxebarria, Myriam. 2000. The Primitives of Temporal Relations. In *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. R. Martin et al. Cambridge, MA: MIT Press.

Domínguez, Laura, Arche, María. J., and Myles, Florence. 2010. Morphology to Semantics mapping in L2: The acquisition of the imperfect-preterit contrast in Spanish. Presented at the *Romance Turn IV: Workshop on the acquisition of Generative grammar,* Tours (France) 25-27 August.

Franceschina, Florencia. 2005. *Fossilised second language grammars: the acquisition of grammatical gender.* Amsterdam: John Benjamins.

Hawkins, Roger and Chan, Cecilia. 1997. The partial availability of Universal Grammar in second language acquisition: the 'failed functional features hypothesis'. *Second language Research* 13, 187-226

Hawkins, Roger and Liszka, Sarah. 2003. Locating the source of defective past tense marking in advanced L2 English speakers. In Hout, R., Hulk, A., Kuiken, F. and Towell, R. (eds.), *The Lexicon-Syntax Interface in Second Language Acquisition.* Amsterdam: John Benjamins, 21-44.

Hawkins, Roger. 2005: Revisiting wh-movement: The availability of an uninterpretable [wh] feature in interlanguage grammars. In Dekydtspotter, L., Sprouse, D.R. and Liljestrand, A., (eds), *Proceedings of the 7th Generative Approaches to Second Language Acquisition Conference (GASLA 2004).* Somerville, MA: Cascadilla Press 124–37.

Hawkins, Roger and Hattori, Hajime. 2006. Interpretation of multiple wh-questions by Japanese speakers: a missing uninterpretable feature account. *Second Language Research* 22, 269–301.

Lardiere, Donna. 1998a: Case and tense in the `fossilized' steady state. *Second Language Research* 14, 1-26.

Lardiere, Donna. 1998b: Dissociating syntax from morphology in a divergent L2 end-state grammar. *Second Language Research* 14, 359-375.

Lardiere, Donna. 2000. Mapping features to forms in second language acquisition. In Archibald, J. (ed.) *Second language acquisition and linguistic theory*. Malden, MA: Blackwell 102–29.

Lardiere, Donna. 2005. On morphological competence. In L. Dekydtspotter, R. A. Sprouse, and A. Liljestrand (eds.). *Proceedings of the 7th Generative Approaches*

to Second Language Acquisition Conference (GASLA 2004) (178–192). Somerville MA: Cascadilla Press.

Lardiere, Donna. 2006. *Ultimate attainment in second language acquisition: A case study*. Mahwah, NJ: Lawrence Erlbaum.

Lardiere, Donna. 2008. Feature-assembly in second language acquisition. In J. Liceras, H. Zobl and H. Goodluck (eds.), *The role of features in second language acquisition*. Mahwah, NJ: Lawrence Erlbaum Associates 106–40.

Lardire, Donna. 2009. Some thoughts on a contrastive analysis of features in second language acquisition." Second Language Research 25.2 (*2009*): 173–227.

Montrul, Silvina and Slabakova, Slabakova. 2003. Competence Similarities between Native and Near-Native Speakers: An Investigation of the Preterite/Imperfect Contrast in Spanish, *Studies in Second Language Acquisition*, 25: 351-398.

Prévost, Philippe and White, Lydia. 2000: Missing surface inflection or impairment in second language acquisition? Evidence from tense and agreement. *Second Language Research* 16, 103–33.

Schwartz, Bonnie D. and Sprouse, Rex A. 1994. Word order and nominative case in nonnative language acquisition: A longitudinal study of (L1 Turkish) German interlanguage. In T. Hoekstra and B. D. Schwartz (eds.), *Language acquisition studies in generative grammar* (pp. 317–368). Amsterdam: John Benjamins.

Schwartz, Bonnie D. and Sprouse, Rex A. 1996. L2 cognitive states and the full transfer/full access hypothesis. *Second Language Research* 12, 40–72.

Slabakova, Roumyana and Montrul, Silvina. 2002. Aspectual Tenses in Spanish L2 Acquisition: A UG Perspective, *In Tense-Aspect Morphology in L2 Acquisition*,Yasuhiro Shirai and Rafael Salaberry (eds), John Benjamins.

Smith, Carlota. 1991. (1st edition). The *Parameter* of *Aspect*. Dordrecht: Kluwer.

Tsimpli, Ianthi M. 2003. Clitics and determiners in L2 Greek. In J.M. Liceras, H. Zobl and Helen Goodluck, (eds). *Proceedings of the 6th Generative Approaches to Second Language Acquisition Conference (GASLA 2002)*. Somerville, MA: Cascadilla Proceedings Project. 331–39.

Tsimpli, Ianthi M. and Dimitrakopoulou, Maria. 2007. The interpretability hypothesis: evidence from wh-interrogatives in second language acquisition. *Second Language Research* 23, 215–42.

Tsimpli, Ianthi M., Mastropavlou, Maria. 2007. Feature Interpretability in L2 Acquisition and SLI: Greek Clitics and Determiners. In H. Goodluck, J. Liceras and H. Zobl (Eds.). The *Role of Formal Features in Second Language Acquisition*. Routledge. 143-183

Verkuyl, Henk J. 1993. *A Theory of Aspectuality: The Interaction between Temporal and Atemporal Structure*. Cambridge: Cambridge University Press.