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**The L2 Acquisition of Morphosyntactic and Semantic Properties of the Aspectual Tenses
Preterite and Imperfect**

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1. Introduction

This study explores the interface between morphosyntax and semantics by investigating how L2 learners acquire the form-meaning connections in the aspectual and temporal domain, an area of significant morphological variation across languages (Giorgi & Pianesi, 1997). The particular focus is on the L2 acquisition of the aspectual interpretation of the Preterite and Imperfect tenses in Spanish by intermediate and advanced English-speaking learners. While acquisition of tense/aspect morphology has been extensively studied in the L2 acquisition of Spanish (Andersen, 1986; Hasbún, 1995; Liskin-Gasparro, 1997; Ramsay, 1990; Salaberry, 1999), French (Coppeters, 1987; Kaplan, 1987; Salaberry, 1998), Italian (Wiberg, 1996), and Portuguese (Schmidt & Frota, 1986) this study breaks new ground by addressing the link between morphosyntax and semantics within current grammatical theory. To account for the crosslinguistic differences between English and Spanish in their temporal and aspectual systems, we adopt Giorgi & Pianesi's (1997) analysis of the parametric differences between Germanic and Romance, an analysis grounded in the theory of features and functional categories of Chomsky's (1995) minimalist program.

Within this theoretical approach, functional categories, such as Complementizer, Tense, Agreement, Determiner and Negation consist of sets of formal features (\pm wh, case, number, gender, finiteness, etc.) and related morphophonological forms (e.g., *that*, *-ed*, *-s*, *the*, *not* in English). Features vary as to their strength: strong features usually correlate with overt morphology and are checked overtly in the syntax (prior to Spell Out), whereas weak features tend to correlate with lack of morphology and are checked at LF (Logical Form). Features are universal but the clausal architecture is not. That is, since functional categories is taken to be the main locus of linguistic variation and parameterization (Borer, 1984; Chomsky, 1995; Wexler &

Manzini, 1988), languages may vary with respect to the realization of particular functional categories in the clausal structure, or with respect to the feature values or feature strength of a given functional category. For language acquisition to take place, children select from a universal inventory of features those relevant to their language and learn to associate these sets of features with morphemes. Parameter values are encoded in the lexical entries of functional categories like Complementizer, Agreement, Tense, Determiners, and the like or in the strength of associated features. In the L2 acquisition situation, the task of the L2 learner is to learn functional categories that are not instantiated in his/her L1; or to acquire new features, together with their strength and morphological realization; or to learn that features already instantiated in his/her L1 have different strength or values in the L2.

The issue of whether functional categories and their features are acquirable in L2 acquisition has taken center stage in most recent investigations of the nature of grammatical representations in SLA, and researchers appear to be divided among three basic positions. There are those who claim that full acquisition of new functional categories and their associated features is feasible (Duffield et al. submitted; Epstein, Flynn & Martohardjono, 1996; Eubank, 1993/1994, 1994; Grondin & White, 1996; Gavrusseva & Lardiere, 1996; Grondin & White, 1996; Haznedar & Schwartz, 1997; Lakshmanan & Selinker, 1996; Lardiere, 1998a, 1998b; Prévost & White, in press; Schwartz & Sprouse, 1994, 1996; Vainikka & Young-Scholten, 1994; 1996; White, 1996) while disagreeing as to how these functional categories are initially acquired (whether they are present from the start or they develop at later stages). For others, access to functional categories, features and feature values is considered to be severely restricted, either because L2 learners can only have access to those features available from their L1 (Hawkins & Chan, 1997; Smith & Tsimpli, 1995; Tsimpli & Roussou, 1991), or because L2 learners suffer

from a 'local deficit' and features remain permanently 'valueless' (Beck, 1998; Eubank, Bischof, Huffstutler, Leek & West, 1997). The third position is represented by Meisel (1997) who claims that L2 learners never acquire functional categories or features simply because L2 acquisition is not constrained by UG, as L1 acquisition is.

In this paper we investigate the acquisition of features and their morphosyntactic realisation by looking at the acquisition of grammatical or sentential (IP) aspect. Current analyses within the generative framework assume that aspect heads a functional projection AspP where the features [+/- perfective] are checked (de Miguel, 1992; Giorgi & Pianesi, 1997, Hernanz, 1991; Demirdache & Uribe-Etxebarria, 1998). While this functional category is instantiated in Spanish and English, these languages vary with respect to the associated features and their morphosyntactic realisation. The different morphosyntactic realisation of the past tenses in these two languages plays a major role in accounting for subtle differences in the interpretation of such tenses.

The findings of the present study bear on two current issues in SLA theory: on the one hand the full or partial accessibility of UG in SLA and, on the other, the presumed association between acquisition of overt morphology and the formal features of functional categories. We show that English-speaking L2 learners successfully acquire the morphosyntactic and interpretative properties of the Preterite and Imperfect tenses in Spanish, and that there is a strong connection between the acquisition of the inflectional morphology and the semantic interpretation of these aspectual tenses.

2. Morphosyntactic and Aspectual Properties of Past Tenses in Spanish and English

Tense and aspect are inflectional markers of temporality on the verb (Bybee, 1985; Comrie, 1976). Tense is a deictic (referential) category that relates situations to some reference

time, usually the moment of speaking, and the most basic tenses are present, past and future (Comrie, 1976). Aspect is concerned with temporality in a different way: it refers to the internal temporal structure of a situation as described by verbs and phrases (Comrie, 1976; Chung & Timberlake, 1985; Smith, 1991). Aspect is the property which makes it possible for a sentence to denote a complete or an incomplete event. It can be encoded in the lexical classes of verbs, usually called lexical aspect, or it can be grammaticalized and marked by inflectional morphology on the verb, such as perfective or progressive morphemes. The latter is what Smith (1991) terms “viewpoint aspect”.

Lexical aspect (also called *Aktionsart*, from German ‘kinds of action’), situation aspect (Smith, 1991) or VP aspect (Slabakova, 1997; Tenny, 1994; Travis, 1991; Zagona, 1994, among many others) is a semantic property which depends on the meaning of the verb and properties of its internal argument and adjuncts. That is, an event can have an inherent limit or endpoint, or it has the potential of continuing indefinitely. By definition, an event with an inherent endpoint is called **telic** (from Greek *telos* “limit, end, goal”) and an event without inherent endpoint is called **atelic**. Telicity is 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>die</i>

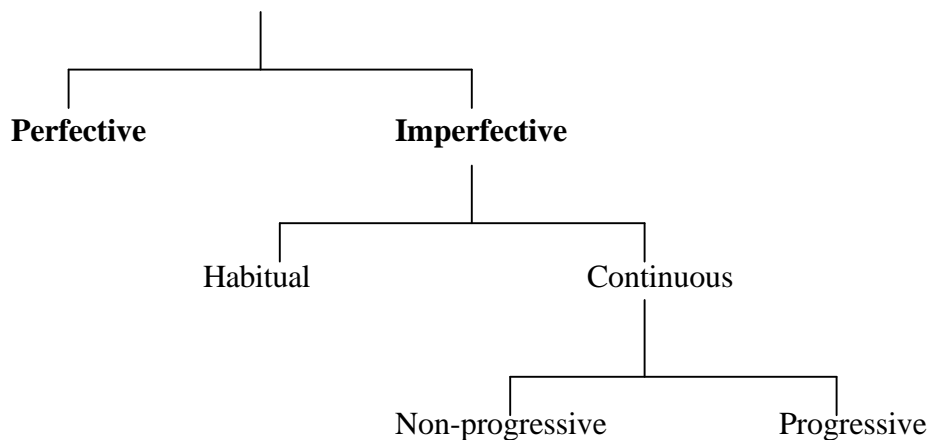
States, such as *know*, *be*, *love*, have no internal structure whatsoever. Activities (*run*, *sing*) are homogeneous processes going on in time without inherent goal (*Mary ran for hours*).

Accomplishments involve a process going on in time and an inherent culmination point, after which the event can no longer continue (*Mary ran a mile*; *Susy baked a cake*). Finally, achievements have an inherent culminating point, but the process leading to that point is

instantaneous (*The old man died; The boat sank.*). Activities, accomplishments and achievements are dynamic classes because they have a process component (Verkuyl, 1993). The lack of culminating point makes activity predicates **atelic**, whereas accomplishments and achievements, having an inherent end, 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 also referred to as viewpoint aspect (Smith, 1991/1997) or sentential (IP) aspect (Schmitt, 1996). Languages express grammatically several aspectual oppositions, as Table 1 (from Comrie, 1976, p. 25) shows:

Table 1: Classification of aspectual oppositions



What concerns us here is the perfective/imperfective opposition. **Perfective** aspect looks at the situation from outside, disregarding its internal structure, as in (2) (I = initial point; F = final point):

- (2) Laura built a house. [/////////]
I F

If Laura built a house, then the event of building started and finished, and the result is a house.

- (8) a. Juan corrió 5 kms. ACCOMPLISHMENT
John ran (PRET) 5 kms.
- b. Juan corría 5 kms.
Juan ran (IMPF) 5 kms.
- (9) a. El hielo se derritió ACHIEVEMENT
The ice melted (PRET).
- b. #El hielo se derretía.
The ice melted (IMPF).

However, because achievements have an inherent endpoint, they are not usually felicitous in the Imperfect, which implies an unbounded situation (9b), unless there is a specific pragmatic context or adverbial that supports such unbounded interpretation, as in (10):¹

- (10) Durante la primavera, el hielo se derretía lentamente.
during spring, the ice melt (imperf.) slowly.

“In the spring time the ice would melt slowly.”

Unlike the situation in Spanish, the perfective/imperfective aspectual opposition is not grammaticalized in English. That is, English lacks a past tense analogous to the Imperfect in Spanish. However, both Spanish and English have grammatical means to express the Progressive/Non-progressive opposition. While English has only one Past Progressive, Spanish has both Imperfect and Preterite Progressive.

	<u>Spanish</u>	<u>English</u>
PRETERITE	Julieta practicó tenis.	Juliette practiced tennis.
IMPERFECT	Julieta practicaba tenis.	
PAST (IMPERFECT) PROGRESSIVE	Julieta estaba practicando tenis.	Juliette was practicing tennis.

¹ Olsen (1999) explains that achievements are unspecified for durativity and depend on pragmatic context to determine whether they are durative or not. Thus, the English sentence, *Bright was winning the race, but didn't win* is acceptable (and so is the Spanish translation with the imperfect *Bright ganaba la carrera pero al final no ganó.*)

PAST (PRETERITE) Julieta **estuvo** practicando tenis.
 PROGRESSIVE

In English, the Simple Past and the Past Progressive can sometimes subsume the meanings of habituality and continuity that the Imperfect conveys in Spanish, but this is not generalizable to all verbs. For example, the Simple Past (analogous to the Preterite in Spanish) is possible with all four classes of predicates (# indicates semantically anomalous):

- | | | | |
|------|----|---|----------------|
| (11) | a. | Mary was sick and she is still sick. | STATE |
| | b. | #Mary ran in the park and is still running. | ACTIVITY |
| | c. | #Mary ran 5 miles and is still running 5 miles. | ACCOMPLISHMENT |
| | d. | #The ice melted and is still melting. | ACHIEVEMENT |

However, with stative predicates, the Simple Past is neutral or indeterminate about the perfective/imperfective distinction. (11a) can either mean that Mary is no longer sick (perfective) or that she is/was still sick (imperfective). With the other predicates, the Simple Past always has a perfective (closed) interpretation, after which the event cannot continue.

The Past Progressive, like the Imperfect tense in Spanish, can be used with activities and accomplishments to express an ongoing event (continuity):

- | | | |
|------|----|--|
| (12) | a. | María corría (IMPF) en el parque. |
| | b. | Mary was running (P. PROG) in the park. |
| (13) | a. | El hombre cortaba (IMPF) un árbol. |
| | b. | The man was cutting (P. PROG) a tree. |

But both in Spanish and English, states are incompatible with the Past Progressive:

- | | | |
|------|----|------------------------------------|
| (14) | a. | *El auto estaba costando \$20.000. |
| | b. | *The car was costing \$ 20.000. |

However, not always does the Imperfect in Spanish translate into the Progressive in English, especially in the case of habituals:

- (15) a. María practic**aba** (IMPF) tennis cuando era niña.
 b. *Maria was practising (P. PROG) tennis when she was a child.

Instead, the verbs *would* or *used to* convey the meaning of habituality expressed by the Imperfect in Spanish:

- (16) Maria **used to/ would** practice tennis when she was a child.

Summarizing, Spanish expresses the perfective/imperfective distinction by means of overt tense/aspect morphology on the verb. The choice of the Preterite or Imperfect has effects on the semantics of the event: the Preterite has a bounded interpretation while the Imperfect is interpreted as unbounded. Events in English can also be construed with different aspectual interpretations, but in contrast to Spanish, these differences are not always encoded morphosyntactically. Instead, English lexicalizes some aspectual distinctions, as with the use of *used to* and *would* to express habituality, relies on the Progressive to convey an ongoing activity or process, or neutralizes the perfective/imperfective distinction in stative predicates, as with the Simple Past. The next section sketches how the parametric distinction between English and Spanish can be captured in syntactic theory.

3. Toward a Theoretical Account

We assume Giorgi & Pianesi's (1997) analysis of the parametric differences between Germanic and Romance languages, an analysis couched within Chomsky's (1995) minimalist framework. Emphasizing a very close connection between morphosyntax and semantics in the aspectual system, Giorgi & Pianesi assert that "languages convey different temporal and

aspectual information because the morphemes expressing tense and aspect exhibit different properties (G & P, 1997, p. 6).”

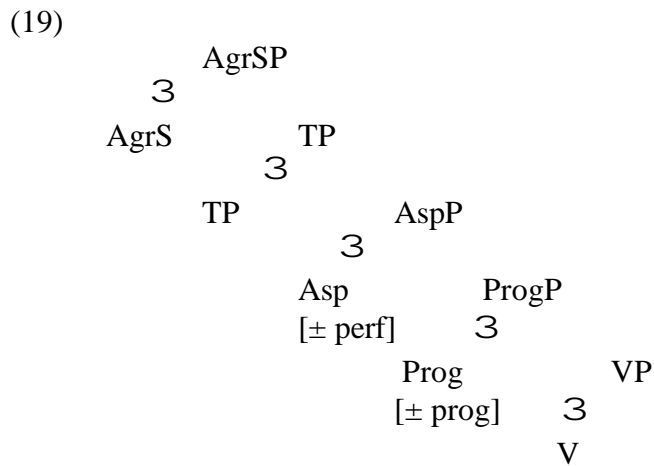
Giorgi & Pianesi explain that English verbs are morphologically “naked” forms that can express several verbal values. For example, *eat* can be a bare infinitive, the first and second person singular, and the first, second and third person, plural of the present tense (*I/You/We/You/They eat*), or even an imperative (*Eat!*). Similarly, some verbs can also be deverbal nouns: *dream, jump, smile, love*. In contrast, in Spanish (and Romance) all verbal forms have to be inflected for person, number and tense (*Yo amo/ tu amas/ él ama*, etc. “I/you/ he love/s), and there are no nouns that can be verbs as well (*el amor* ‘the love’). According to Giorgi & Pianesi, the main difference between Romance (Spanish in our case) and English verbs is that in Romance verbs have the inflectional features [person, number] while English verbs lack such features altogether. Based on an analysis of the interpretative facts of the Present tense with eventive predicates, Giorgi & Pianesi claim that English verbs acquire categorial features by being associated with the aspectual feature [+perfective]. In English, the continuous reading is not normally available in (17) while the Spanish example in (18) can be used to describe an action in progress:

(17) #John eats an apple right now.

(18) Juan come una manzana en este momento.

In English the Progressive is required to express the continuous meaning in the Present (*John is eating an apple*). For Giorgi & Pianesi, the peculiar interpretive properties of the Present tense in English are largely determined by morphosyntactic characteristics of the English verb (a naked form), as described above. Spanish does not associate the feature [+perfective] with the Present tense, and the continuous interpretation is available.

Under the assumption that agreement, tense and aspect head their own functional projections (Chomsky, 1995; Pollock, 1989; among many others), Giorgi & Pianesi propose that the functional category AspP, and its associated features [+/- perfective] entailing closure, is instantiated in Germanic & Romance languages. Additionally, we assume, that a functional projection ProgP, where the features [+/- progressive] are checked (analogous to Demirdache & Uribe-Etxebarria's (1998) Asp *within* phrase), is also instantiated in the two languages. Thus, English and Spanish are assumed to have the following clausal architecture (omitting irrelevant details):



The difference between English and Spanish lies in the feature composition and values of the AspP category. According to Giorgi & Pianesi, English associates the feature value [+perfective], which encodes boundedness, with all eventive predicates (i.e., activities, accomplishments and achievements). A verb in English has the feature specifications [+perfective, +V, -N], and it is this inherent aspectual feature [+ perfective] which makes English verbs recognizable as such. The feature value [- perfective] is not relevant in English.² However, we will assume that in Spanish AspP is associated with both [+/- perfective] feature. Because

verbs are always complex words consisting of a root and person and number inflection, they are never inherently associated with the feature [+perfective] and have the specification [+V; -N, person, number] instead, as shown in (20).

(20)	English Verbs	Spanish Verbs
	$\left[\begin{array}{l} +V, -N \\ + \text{ perfective} \end{array} \right]$	$\left[\begin{array}{l} +V, -N \\ \text{person} \\ \text{number} \end{array} \right]$

Giorgi & Pianesi are quite sketchy on the specific details of the analysis, and do not say much about the feature strength of the [perfective] feature in English or Romance languages. As we understand it, the crucial difference between English and Spanish, then, is that the features [+/- perfective] are not part of the feature specification of verbs in Spanish and are associated with overt tense morphology. We speculate that in Spanish the [+ and – perfective] features are checked overtly in the AspP phrase, through Preterite and Imperfect tense morphology.³ In English, only eventive predicates check the feature [+ perfective] in AspP through Simple Past tense morphology.

(21)	English AspP		Spanish AspP	
	<u>F-features</u>	<u>M-paradigm</u>	<u>F-features</u>	<u>M-paradigm</u>
	+ perfective	Simple Past	+ perfective	Preterite
			- perfective	Imperfect

Given these facts, the task of the English-speaking learner of Spanish involves recognizing that Spanish verbs are morphologically complex words that are not inherently

² Since English does not have the perfective/imperfective contrast grammaticalized, and verbs are inherently perfective, another possibility is to postulate that English lacks the functional category AspP altogether, and that the Simple Past only instantiates Tense.

³ It is not clear in the literature what the exact properties of the [-perfective] features are. Giorgi & Pianesi say it is the default value and is not associated with any morphology (in Italian or English). Olsen (1999) argues that there is a [+ imperfective] feature, which is different from [- perfective]. Alternatively, we could assume that English has the [+perfective] feature while Spanish has the [+ perfective] and the [+ imperfective] feature.

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. Thus, knowledge of the perfective/imperfective aspectual distinction in Spanish comprises knowledge of the morphosyntax (the Preterite/Imperfect tense paradigms) and its associated semantic interpretation (bounded vs. unbounded situation). Given these theoretical assumptions, the two related questions that arise are: 1) whether the L2 acquisition of features is in principle possible, and 2) whether knowledge of morphosyntax and semantics are correlated or dissociated in interlanguage grammars. Before we approach these questions we turn to the next section where the most recent proposals on the L2 acquisition of features, feature values, and their associated morphological realization are laid out.

4. Perspectives on the L2 acquisition of features, feature values, and their morphological realization

In recent years, the question of whether UG is available in L2 acquisition has been approached from the perspective of the acquisition of functional categories and their associated formal features. In this section we focused on two contrasting positions: the “full access” view as represented by the Full Transfer/Full Access Hypothesis of Schwartz & Sprouse (1996) and the “partial access” view evident in Beck’s (1998) and Hawkins & Chan’s (1997) proposals.

The Full Transfer/Full Access hypothesis claims that all of the abstract syntactic properties of L1 grammars (including functional categories and feature strength) are initially transferred in interlanguage grammars. Interlanguage grammars are constrained by UG throughout development. While inflectional morphology does not transfer, their abstract feature specifications and syntactic consequences do transfer (but see Eubank (1993/1994) for an

opposite view). That is, L2 learners know the abstract properties of functional categories and their syntactic consequences, but may lack knowledge of how features are realized morpho-phonologically (see also Gavrusseva & Lardiere (1996), Haznedar & Schwartz (1997), Lardiere (1998a,b), Prévost & White (in press)). Gavrusseva & Lardiere (1996) show distributional evidence suggesting that IP and CP appear to be present at earliest stages of acquisition even when the production of finite inflection is not always supplied. Similarly, Prévost & White (in press) found that while there was a strong correlation between lack of complementizers, agreement and tense morphology and the distribution of finite and nonfinite verbs for L2 children, L2 adults used non-finite markers as a substitute for finite inflection, suggesting that they knew the distributional properties of finite verbs but used infinitival forms when they were uncertain about the morphology. Even more suggestive that the morphology-underlying structure correlation does not always hold is Lardiere's (1998a, 1998b) evidence from a subject whose steady state grammar includes several functional categories and the [+/-] finite distinction, despite the fact that her knowledge of inflectional morphology is still lacking.

Proponents of the "partial accessibility of UG" position attempt to explain why some L2 learners do not attain the same competence as native speakers past a maturational stage, arguing that a subpart of UG is not available. The specific claim is that the acquisition of formal features is restricted in some way for L2 learners, either because features are permanently "impaired" (i.e. from initial to final stages) (Beck, 1998), or because L2 learners can only make use of features instantiated in their L1 (Hawkins & Chan, 1997; Smith & Tsimpli, 1995; Tsimpli & Roussou, 1991). In short, they claim that the presence of overt morphology in interlanguage production does not entail knowledge of formal features of functional categories. Specifically, Beck (1998) and Eubank et al. (1997) propose that the feature values implicated in verb movement become

‘impaired’, and this causes L2 grammars to overgenerate verb raising and allow for optional raising at early and later stages of development.

Hawkins & Chan’s (1997) Failed Functional Features Hypotheses states that access to new parametric options as instantiated in functional categories and their associated features are no longer available in L2 acquisition after a critical period, but principles of UG still are. L2 learners may be able to map features from functional categories in their L1 to new L2 morpho-phonological material, but will not have access to the functional features of the L2. In other words, L2 learners may use the morphology of the target language but with the feature specifications of their L1. Hawkins & Chan show that advanced Chinese learners of English are able to learn CP morphology but are unable to reject subjacency violations because their mental representation does not involve wh-operator movement triggered by the features $[\pm \text{wh}]$. In contrast, intermediate Chinese learners were more sensitive to subjacency violations because they were using another operation allowed by their L1. In short, the Local Impairment Hypothesis and the Failed Functional Features Hypothesis share the assumption that while the L2 morpho-phonology may be acquired, L2 learners will definitely not acquire the formal features and syntactic implications associated with it: features will remain permanently “inert” or “valueless” or will be stuck with the values and syntactic options of their first language.

The above hypotheses make different predictions with respect to the acquisition of features, feature values and their associated morphosyntactic representation, as well as with the acquisition of the syntactic consequences associated with particular functional categories. Extending these proposals to the acquisition of aspect and its associated morphological and semantic properties, each proposal predicts different problems for English-speaking learners of Spanish at intermediate and advanced levels of proficiency.

The Full Transfer/Full Access Hypothesis predicts that while L2 learners may or may not learn the appropriate morpho-phonology associated with Preterite and Imperfect tenses, if intermediate learners are still highly constrained by their L1 they will not have acquired all the formal features of Spanish AspP and will not differentiate semantically between Preterite and Imperfect. Advanced learners are predicted to acquire successfully the perfective/imperfective semantic opposition.

The Local Impairment Hypothesis predicts that intermediate and advanced L2 learners of Spanish may or may not acquire overt tense/aspect morphology but will definitely not acquire the semantic opposition between the Preterite and Imperfect tenses in Spanish because the strength of the feature [perfective] are assumed to be permanently impaired in L2 grammars.

Hawkins & Chan's Failed Functional Features Hypothesis predicts successful acquisition of the Preterite/Imperfect morpho-phonology by intermediate and advanced learners, but failure to acquire the feature value [-perfective] associated with Spanish Imperfect tense, which English lacks. Thus, English learners will not acquire the semantic contrast between these two tenses in Spanish. However, intermediate English learners, who are more constrained by their L1 than advanced learners, might use the feature [-prog] of the functional category ProgP in their L1 to mask acquisition of the [-perfective] feature in Spanish, and hence give the impression that they have acquired the semantic contrast with some verbs. Advanced learners, who are past the stage of strong L1 influence, are predicted not to have the contrast (unless they also use +prog as the intermediate learners).⁴

⁴ This last prediction for advanced learners is based on Hawkins and Chan's (1997) following claims: "Faced with learning a second language with differently fixed functional category features, two possible effects of the failed functional features hypothesis appear to be predicted for post-critical period L2 learners. Firstly, they will map morpho-phonological forms from the L2 on to L1 feature specifications. The performance of the L2 learners with such grammar will display properties of a familiar kind: L1 syntax with L2 lexical items . . . Secondly, with continued exposure to the L2, they will progressively approximate in performance to native speakers of the target language and away from the L1. But to do this, given that the differently fixed functional features are inaccessible,

Table 2 summarizes the predictions of the hypotheses outlined above with respect to the acquisition of the morphosyntax and semantics of AspP in Spanish by intermediate and advanced English learners.

Table 2: Summary of Predictions of the Partial Transfer, Missing Surface Inflection, Local Impairment and Failed Functional Features Hypotheses

	English learners of Spanish	Pret./Imperf. morphology	[± perf.] contrast
Full Transfer/Full Access	intermediate	yes or no	no ⁵
	advanced	yes or no	yes
<u>Partial Access</u>			
Local Impairment	intermediate	yes or no	no
	advanced	yes or no	no
Failed Functional Features	intermediate	yes	(yes) ⁶
	advanced	yes	no

Before spelling out the hypotheses for the present study we first review previous studies on the acquisition of tense and aspect in Spanish as a second language.

5. Previous Studies

The investigation of the acquisition of tense/aspect in Spanish as a second language has been concerned with the development of tense/aspect morphology among instructed learners (Hasbún, 1995; Lafford, 1996; Liskin-Gasparro, 1997; Ramsay, 1990, Salaberry, 1997, 1999) and naturalistic learners (Andersen, 1986). More specifically, these studies were conducted to

they will establish grammatical representations which diverge from those of native speakers, as well as from their own L1s, but which are nevertheless constrained by the principles of UG: ‘possible grammars’ (Hawkins & Chan, 1997: p. 216).

evaluate the Primacy of Aspect Hypothesis of Andersen (1986), which states that verbal morphology initially encodes lexical aspect rather than tense in developing grammars. Thus, Preterite is usually used with telic events (accomplishments and activities) while Imperfect is mapped to atelic predicates (activities) and stative predicates.

To investigate the predictions of this hypothesis, these studies have mostly concentrated on the acquisition of lexical aspect as evidenced in oral and written production data. Using a variety of data collection procedures (oral interviews, movie narratives, retell stories in role-play situations, etc.), researchers have looked at the aspectual classes of the verbs produced by the subjects based on Vendler's (1967) classification, and the type of tense/aspect morphology (Preterite or Imperfect) appearing with each aspectual class. Although these studies report different findings and support for the lexical aspect hypothesis is not categorical, most studies appear to show that the Preterite tense, which is hypothesized to be the default (Liskin-Gasparro, 1997; Salaberry, 1999), is acquired first and appears with telic events (accomplishments and achievements). The Imperfect is a later acquisition and is usually mapped to stative predicates.

All of these studies have investigated the link between overt morphology and the aspectual class of verbs, or lexical aspect, but are of limited significance for our purposes because they are only confined to production data, and this type of data cannot be used reliably to make inferences about the acquisition of functional categories, let alone their semantic implications. Furthermore, as we have already discussed, learning a specific functional category entails much more than learning its morpho-phonology. Production data of this sort by itself,

⁵ Although the FT/FA is a theory of the initial state, we are assuming that intermediate learners will still be highly influenced by their L1 at intermediate stages (an even more so at beginning stages) in the grammatical domain under investigation.

⁶ If they use [+ progressive].

therefore, is not suited to investigate whether formal features and the different interpretations associated with these two tenses in Spanish have been successfully acquired.

This study, together with Slabakova & Montrul (in preparation), are the first studies to date which have attempted to go beyond the acquisition of tense/aspect morphology and probe into L2 learners' interpretation of the aspectual tenses Preterite and Imperfect by approaching the issue within the framework of current grammatical theory and the theory of Universal Grammar in SLA. While investigating the interaction of lexical and grammatical aspect in the present study we ask whether knowledge of Preterite/Imperfect morphology correlates with the bounded/unbounded semantic opposition that the features [+/- perfective] instantiate. Ultimately, our aim is to contribute to the different theoretical accounts on the acquisition of functional categories in L2 acquisition.

6. Hypotheses

Following Schwartz & Sprouse (1994, 1996) and White (1985) we assume that the L1 grammar constitutes the initial hypotheses about the L2 and that functional categories, features and feature values are potentially fully acquirable in L2 acquisition (the Full Transfer/Full Access Hypothesis of Schwartz & Sprouse). In principle, we expect advanced learners of Spanish to have no problems with the morphology or the semantic interpretation of Preterite and Imperfect tenses, but hypothesize that earlier learners will rely more on their L1 grammar. In particular, we expect intermediate learners to be less accurate than advanced learners with Preterite/Imperfect morphology. Because intermediate learners will probably not yet have the feature [- perfective] in their grammar, they might map the continuous meaning of the Imperfect tense onto the functional category responsible for checking the features of the progressive/non-progressive opposition (ProgP).

If this is the case, then Accomplishments will present no problem because with this lexical class, the Preterite in Spanish and the Simple Past in English have a bounded interpretation (*Mary built* (S. PAST) *a house*, *María construyó* (PRET) *una casa*), while the Imperfect and the Progressive denote an unbounded eventuality (*Peter was reading* (PAST PROG.) *a book*/ *Pedro leía* (IMPF) *un libro*). Achievements will not present a problem either because they are compatible with the progressive (*El hielo se estaba derritiendo* (IMPF. PROG.)/*The ice was melting* (PAST PROG.)) in both languages. Unlike accomplishments and achievements, states will be problematic because they are not compatible with the Progressive tense in either language (#*María estaba sabiendo la respuesta*/#*Mary was knowing the answer*), and learners cannot rely on the feature [+prog]. Therefore, intermediate learners might have difficulty acquiring the perfective/imperfective semantic contrast with stative predicates.

7. Methodology

7.1 Participants

Participants in the study were 71 adult English speakers who had learned or were learning Spanish in a formal setting and whose proficiency ranged from intermediate to advanced. Most participants were recruited from intermediate and advanced Spanish classes at two major research universities in the U.S., and the rest were teaching assistants and professors who were deemed to have an advanced level of proficiency in Spanish. Their mean age was 25.93 and the mean age of first exposure to Spanish as a second language was 13.97. A group of 23 Spanish native speakers from different Spanish-speaking countries acted as control (mean age 37.43).

7.2. Tests

In order to independently assess the English-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.

Two tasks were especially designed to test the acquisition of the morphological and semantic properties of aspectual tenses in Spanish. The first task, which hereafter we will refer to it as the morphology test, was a test similar to one used by Salaberry (1997) to test the acquisition of Preterite/Imperfect morphology with different aspectual classes of verbs. The test consisted of an adapted version of the “Psycho” passage from the book *Pasajes* (Bretz, Dvorak & Kirschner, 1992). Participants had to select from two options the correct form of the verb in the past, as the example below shows:

Example:

El jefe le (1) daba/dio el dinero a la empleada para depositarlo en el banco. La empleada (2) trabajó/trabajaba para la compañía pero no (3) estuvo/estaba contenta con su trabajo y (4) quiso/quería otro trabajo. . . .

“The boss gave the money to the employee to be deposited in the bank. The employee worked for the company but was not happy with her job and wanted another job . . .”

The objective of this task was to see whether learners distinguished the morphological endings of Preterite and Imperfect tenses in the context of a narrative. The passage had a total of 30 verbs for which the appropriate tense had to be selected. The choice of verbs was balanced among the different lexical classes (states, activities, accomplishments and achievements) and there were 15 expected responses for the Preterite and 15 for the Imperfect. For each verb only one of the tenses was correct in the context provided by the story. We avoided using sentences in which the verb was correct in either tense.

The second test instrument was a sentence conjunction judgment task which specifically tested the semantic implications of the Preterite and Imperfect tenses. In this task, subjects were presented with a list of sentences consisting of two coordinated clauses. The clauses were conjoined by the word *y* ‘and’ or *pero* ‘but’. 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. In most cases, we had minimal pairs in which the Imperfect tense in the first clause made the sentence logical, while the Preterite made it illogical. Following is an example with a stative verb:

- (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 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. In each class, 7 verbs appeared in the Preterite and 7 in the Imperfect tense. In order to establish that L2 learners can distinguish logical from illogical sentences in Spanish, the instrument also included 14 distractor sentences (7 logical and 7 illogical) using Preterite, Imperfect and other tenses:

- (c) Ayer fui a trabajar a pie pero llegué en bicicleta

Yesterday I walked to work but arrived by bike.

-2 -1 0 1 2

(d) María trabaja en una panadería y hace tortas.

Maria works in a bakery and makes cakes.

-2 -1 0 1 ②

7.3. Results

7.3.1. Group Results

According to the results of the proficiency test, the L2 learners were split into two groups: intermediate (n = 42) and advanced (n = 29). Table 3 shows the mean scores and standard deviations for the two proficiency groups, who were significantly different from each other as revealed by a one-way ANOVA ($F(1,69) = 184.557, p < 0.0001$):

Table 3: Mean Scores on the Proficiency Test (maximum possible = 50)

	Intermediate (n =42)	Advanced (n =29)
mean	19.06	39.54
sd	6.45	4

The intermediate and advanced groups were also significantly different from each other in the morphology test ($F(1,69) = 44.80, p < 0.0001$). Table 4 displays the means and standard deviations for each group:

Table 4: Mean Scores on the Morphology Test (maximum possible = 30)

	Intermediate (n =42)	Advanced (n =29)
mean	21.12	26.72
sd	3.86	2.02

Results of the sentence conjunction judgment task were submitted to a factorial analysis of variance with repeated measures, General Linear Model, with Group as between factor (native,

intermediate and advanced), and Tense (Preterite, Imperfect) and Verb (accomplishment, achievement and state) as the within factors. Overall results revealed significant main effects for Group, Tense and Verb, and except for the Tense by Verb interaction, all other interactions were significant at the .05 level. The statistical results are presented in Table 5:

Table 5: Overall Statistics for the Sentence Conjunction Judgment Task

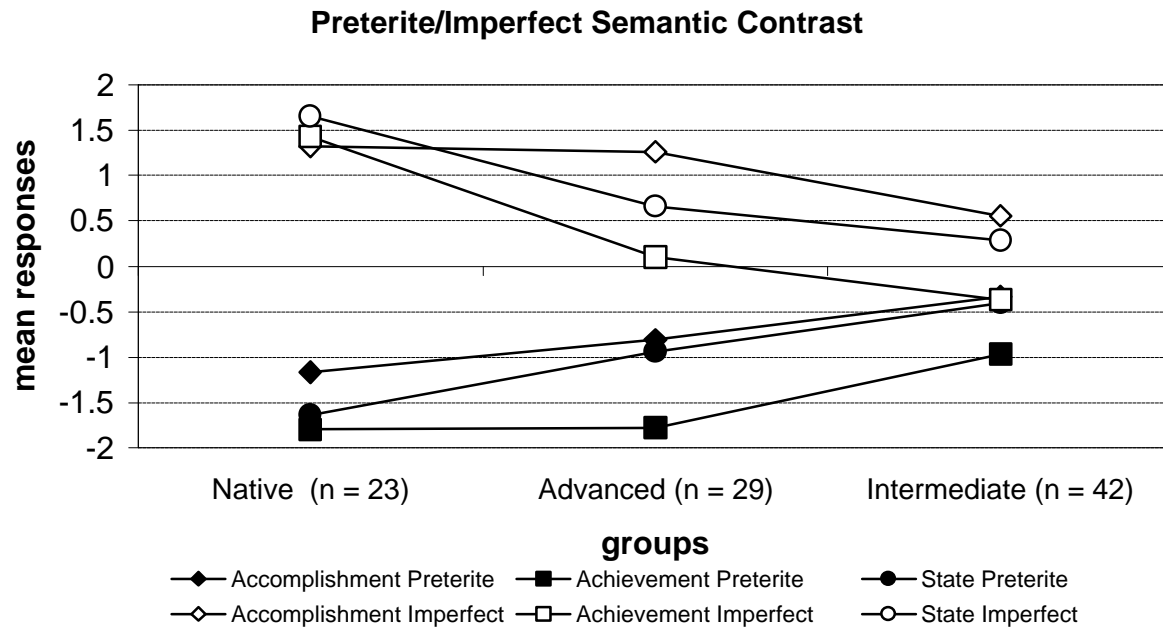
<u>Source</u>	<u>df</u>	<u>F</u>	<u>p-value</u>
<u>Between</u>			
Group	2	3.217	0.041 *
<u>Within</u>			
Verb	2	33.576	0.0001 *
Tense	1	887.038	0.0001 *
Group x Tense	2	151.521	0.0001 *
Group x Verb	4	3.435	0.017 *
Verb x Tense	2	2.107	0.123
Group x Tense x Verb	4	2.797	0.026 *

These results suggest that the native speakers and the learners distinguished between Preterite and Imperfect tenses and between accomplishment, achievement and state predicates. Moreover there were some differences between groups with some verbs and some tenses. In what follows we focus on the interaction effects.

Figure 1 displays the results by group and by verb class. Recall that sentences with the Preterite tense in the first clause were illogical and were supposed to be judged somewhere between -1 and -2 and those with the Imperfect were logical (expected scores from 1 to 2). Here, we are not interested in establishing statistical significance between the learner groups and

the native speakers. Since we are mostly concerned with the internal systematicity of interlanguage grammars, we concentrate on the distance between the Preterite (lines with filled shapes) and Imperfect sentences (lines with outline shapes):

Figure 1: Sentence Conjunction Judgment Task. Overall Mean by Proficiency Group



As can be seen, all groups appear to discriminate between the Imperfect and the Preterite sentences with all verb classes, as the Tense by Group interaction shows. The contrast was significant for all the groups (although the distance narrows significantly for the intermediate group), suggesting that all groups discriminate semantically between the two tenses.

7.3.2. The relationship between morphosyntax and semantics

Our next step was to see whether responses on the test of semantic interpretations was related to how learners performed on the morphology test. In other words, is knowledge of morphology related to the semantic implications of these tenses? To answer this question we considered how learners performed on the morphology test. Those learners who scored above 80% (24 or higher) were deemed to know the morphology associated with each tense and those

who scored below 75% (23 and lower) were considered not to be so certain. We established such high criteria because instructed L2 learners are usually explicitly taught and drilled on verb tense paradigms, and the test used was a prototypical classroom exercise. In addition, since the test involved choosing one of two responses for each blank, leaving ample room for guessing, the lowest possible score was 50%.

Based on the above criteria, learners were divided into two groups, which we named the Yes-morphology and the No-morphology groups. All the advanced learners, except one, ended up in the Yes-morphology group. The intermediate group was basically split into two sub-groups: 18 learners were classified as the Yes-morphology group and the remaining 24 formed part of the No-morphology group. The number of subjects per group is shown in Table 6:

Table 6: Groups based on Knowledge of Preterite/Imperfect Morphology

Yes-morphology (scores 24-30)	No-morphology (scores 15-23)
18 intermediate	24 intermediate
28 advanced	1 advanced
Total 46	Total 25

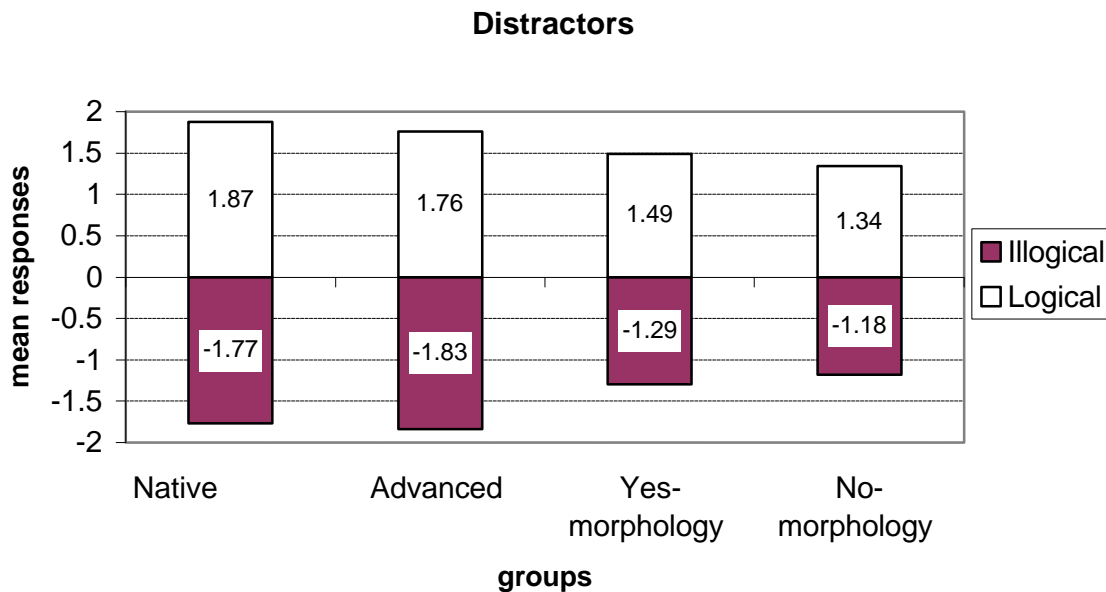
A t-test performed on the proficiency scores of these two intermediate groups showed no significant differences between the Yes-morphology and the No-morphology groups ($p < 0.06$).

A factorial ANOVA on the new four groups (native, advanced, interm/Yes, interm/No) was run, and this time there was a main effect for group ($F(3,540) = 2.83, p < 0.038$). We now report results on three groups of learners: the advanced group and two intermediate groups (no-morphology and yes morphology)

Figure 2 shows the contrast between logical and illogical sentences (distractors), which did not always involve Preterite or Imperfect tenses. If learners do not distinguish between

logical and illogical sentences independently of tense, then one cannot conclude that failure to distinguish logical and illogical sentences with the relevant test items is related to lack of knowledge of Preterite/Imperfect morphology. Paired-samples t-tests revealed that for all groups there was a statistically significant difference between logical and illogical distractors (native: $t(25.419)$ $df 22$, $p < 0.0001$; advanced: $t(40.083)$ $df 28$, $p < 0.0001$; yes-morphology: $t(15.558)$ $df 18$, $p < 0.0001$; no-morphology: $t(11.849)$ $df 23$, $p < 0.0001$). The mean scores are displayed in Figure 2:

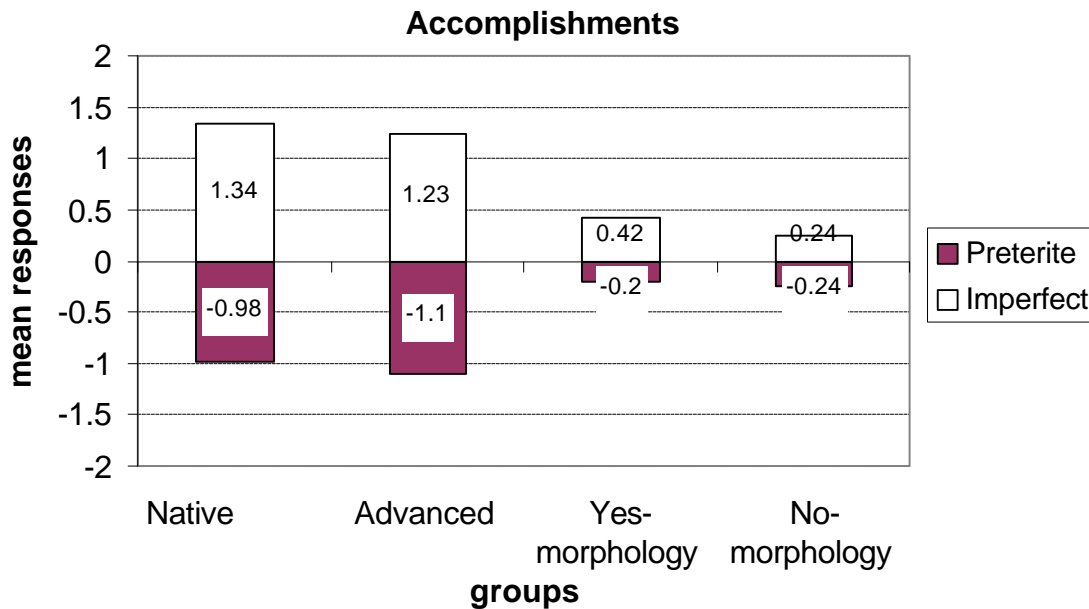
Figure 2: Sentence Conjunction Judgement Task: Mean response on Distractors



Based on the results of the distractor sentences, we can now confidently assume that any difference with the test items will be related to the choice of Preterite or Imperfect tense. For all lexical classes of verbs (accomplishments, achievements and states), there was a statistically significant contrast between the Preterite and Imperfect tenses for the native, the advanced and the intermediate group which was accurate on the morphology test (Yes-morphology group).

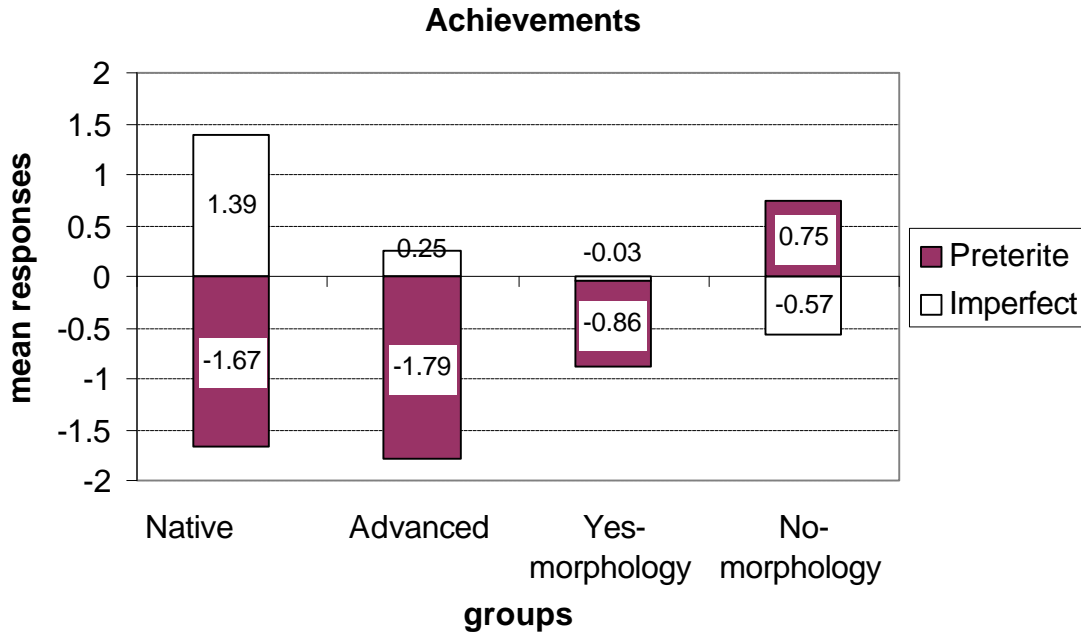
Figure 3 illustrates the results of accomplishment verbs. The contrast between Preterite and Imperfect was statistically significant for all groups (native: $t(11.087)$ df 22, $p < 0.0001$; advanced: $t(10.979)$ df 26, $p < 0.0001$; yes-morphology: $t(2.223)$ df 18, $p < 0.039$; no-morphology: $t(2.083)$ df 23, $p < 0.049$).

Figure 3: Sentence Conjunction Judgment Task: Mean Responses on Accomplishments



The results of achievements is shown in Figure 4. The Preterite/Imperfect contrast was significant for all the groups except for the No-morphology group, who also displayed the opposite pattern of response (rejected sentences with Imperfect and accepted those with Preterite) (native: $t(16.636)$ df 22, $p < 0.0001$; advanced: $t(11.492)$ df 26, $p < 0.0001$; yes-morphology: $t(3.142)$ df 18, $p < 0.006$; no-morphology: $t(0.956)$ df 23, $p < 0.349$). There were also statistically significant differences between the native speakers and the advanced and Yes-morphology groups with their judgments on the sentences with the Imperfect tense (one-way ANOVA: $F(2,91) = 40.015$, $p < 0.0001$).

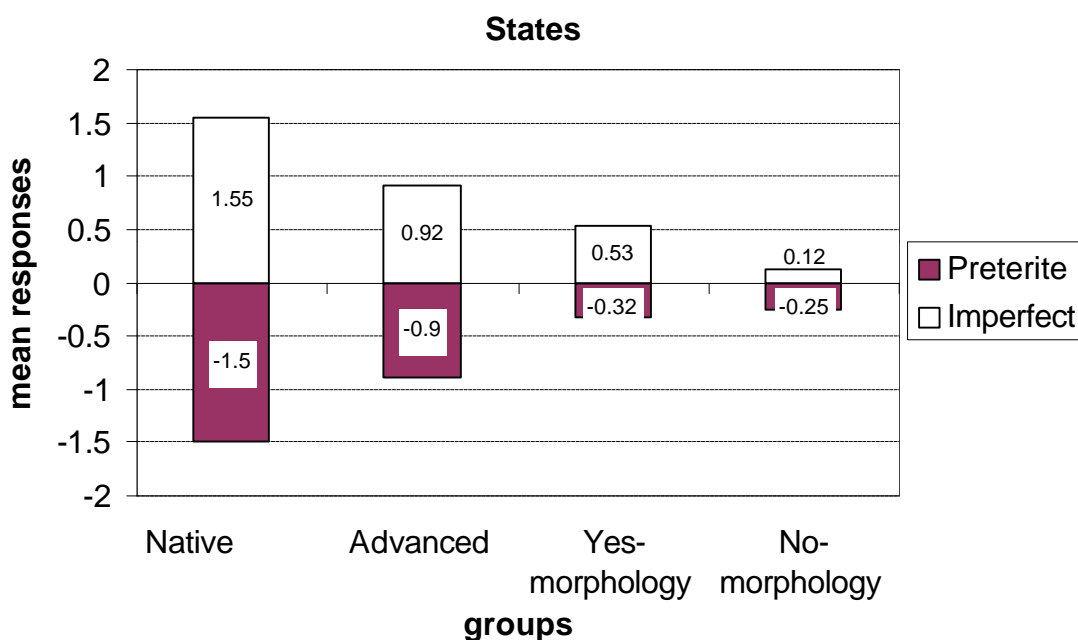
Figure 4: Sentence Conjunction Judgment Task: Mean Response on Achievements



Recall that achievement predicates in the Imperfect were not very felicitous without a context supporting an unbounded interpretation. However, the native speakers accepted the sentences with Imperfect more than the advanced group and the Yes-morphology group, and the difference was significant. This suggests that native speakers might be using pragmatic strategies to license the unbounded interpretation of achievements. We return to this point in the discussion

Finally, the results of States are given in Figure 5. The Preterite/Imperfect contrast was significant for all groups, except the No-morphology group (native: $t(14.605)$ df 22, $p < 0.0001$; advanced: $t(7.961)$ df 26, $p < 0.0001$; yes-morphology: $t(3.380)$ df 18, $p < 0.003$; no-morphology: $t(1.092)$ df 23, $p < 0.148$):

Figure 5: Sentence Conjunction Judgment Task: Mean Responses on States



Summarizing, group results show that advanced and intermediate learners who scored above 80% accuracy with the morphology test appear to have acquired the semantic implications associated with Preterite and Imperfect tenses in Spanish. By contrast, those intermediate learners who have not controlled knowledge of the Preterite/Imperfect morpho-phonology are not yet sensitive to the semantic contrast between these tenses, especially with achievement and state predicates. The next section examines whether the correlation between knowledge of morphology and knowledge of semantics holds at the individual level.

7.3.3. Individual results

To calculate individual results scalar responses were converted into absolute values in the following way. If illogical sentences had been assigned a score on the scale between -1 and -2 and a logical sentence a score between 1 and 2 , those responses were considered correct and were awarded 1 point. Negative responses for logical sentences and positive responses for illogical sentences were considered incorrect and received a 0. All the native speakers had at

least 5 out of 7 correct responses per sentence type. Subjects who had at least 5 Imperfect and 5 Preterite sentences correct with each class of verbs were deemed to have the contrast. We applied this criterion to the two learner groups to establish whether there was a correlation between knowledge of morphology and knowledge of semantics with the three types of predicate tested (accomplishments, achievements and states). The frequency distributions are displayed in Table 7 (Note that in all cases, there was a small group of subjects for whom the presumed acquisition of the semantic contrast was unclear because they had only 4 sentences correct with imperfect and 5 with Preterite, or vice versa):

Table 7: Distribution of learners according to acquisition of the morphology and semantics of aspectual tenses in Spanish (Yes = have acquired, No = have not acquired)

ACCOMPLISHMENTS

	<u>Yes morphology</u>	<u>No morphology</u>	unclear (n = 5)
Yes semantics	21	2	
No semantics	21	22	
	$p < 0.0023$		

ACHIEVEMENTS

	<u>Yes morphology</u>	<u>No morphology</u>	unclear (n = 4)
Yes semantics	20	1	
No semantics	21	25	
	$p < 0.0023$		

STATES

	<u>Yes morphology</u>	<u>No morphology</u>	unclear (n = 5)
Yes semantics	21	2	
No semantics	21	22	
	$p < 0.0001$		

Overall these contingency tables show that the proportion of learners who are NOT accurate with the Preterite/Imperfect morphology (No morphology cell) and have acquired the perfective/imperfective semantic opposition (Yes semantics cell) is quite low. Most learners who

do not have the morphology are concentrated in the No-semantics cell, and the contingency of acquisition of the two properties is statistically significant in all cases. However, there is also a considerable number of subjects in each table ($n = 21$) who might appear to be problematic because they are accurate with the morphology but have not yet acquired the semantic contrast. We will suggest that this pattern of response is not problematic and provide a possible explanation in the discussion.

To tease apart whether knowledge of the morphology and semantics of sentential aspect is a gradual development, Table 8 shows the percentage of subjects in each proficiency group who have acquired both the semantic and morpho-syntactic properties of the Preterite and Imperfect tenses:

Table 8: Number and Percentage of Subjects per group who have acquired the morphosyntax and semantics of Preterite and Imperfect tenses in Spanish

	ACCOMPLISHMENTS	ACHIEVEMENTS	STATES
<i>Native</i> (N = 23)	23 (100%)	23 (100%)	23 (100%)
<i>Advanced</i> (N = 29)	21 (72%) (4 unclear)	18 (62%) (3 unclear)	20 (69%) (2 unclear)
<i>Interm-Yes morph</i> (N = 18)	2 (11%)	4 (22%) (1 unclear)	2 (11%) (3 unclear)
<i>Interm-No morph</i> (N = 24)	0 (1 unclear)	0	0

As can be seen, all the native speakers and most of the advanced learners, who have acquired the morphosyntactic distinction, also have the semantic contrast with all the aspectual classes tested.⁷ In contrast, with the two intermediate groups we see that while a very small percentage of those

learners who performed above 80% in the morphology test (Yes-morphology group) have already acquired the perfective/imperfective semantic opposition as well, none of the learners in the No-morphology group have yet acquired the aspectual distinction yet. Note that the unclear cases (those learners who performed well above 5 out of 7 with Imperfect and 4 out of 7 with Preterite, or vice versa) are distributed among the two groups who already know the morphology (advanced and intermediate-yes). These results suggest that acquisition of morphology precedes acquisition of semantics, and that both acquisitions are gradual developments.

8. Discussion and Conclusion

This study set out to investigate whether the formal features of the functional category AspP are fully acquirable in the L2 acquisition of Spanish, and whether there exists a close connection between the acquisition of the morphosyntactic properties of aspectual tenses Preterite and Imperfect (overt tense morphology) and the semantic interpretations associated with the formal features [\pm perfective]. Overall, results show that there is an important relationship between the acquisition of tense/aspect morphology and the acquisition of the bounded/unbounded semantic distinction associated with these tenses.

All the advanced learners in this study (with the exception of one outlier) have acquired the morphological properties of Preterite and Imperfect and most of them have already acquired the semantic distinction as well. When group results were considered, those intermediate learners who appear to control the tense/aspect morphology showed sensitivity to the perfective/imperfective semantic opposition with all verb classes, although the means were statistically significant from the advanced and native groups. However, individual results revealed that only a very small percentage of these learners (around 20%) had indeed acquired

⁷ The only advanced learner who did not have the morphology (refer to Table 4) did not have the semantic contrasts

the semantic contrast with all the lexical classes, while the rest did not yet distinguish semantically between Preterite and Imperfect with any of the verb classes. Furthermore, results show that intermediate learners who have NOT controlled the Preterite/Imperfect morphological distinction are NOT sensitive to the semantic contrast between the two tenses, especially with achievements and states. In general (with the exception of 2 subjects in the total pool) we did not find learners who have acquired the perfective/imperfective semantic contrast and whose knowledge of the inflectional morphology was still lacking. However, we did find many intermediate level learners who exhibited the opposite pattern of response: namely, acquisition of morphology but no acquisition of the semantic contrast. We address will this situation shortly.

Our findings suggest that 1) the formal features associated with the functional category AspP are acquirable and “unimpaired” in SLA, 2) knowledge of morphology precedes knowledge of semantics in this aspectual domain, and 3) acquisition of the semantic contrast is a gradual development. Let’s consider first whether the results obtained support the “full access”, or “partial access” to functional categories and features positions. We then go on to address whether and how the results of the intermediate and advanced learners support the specific predictions of the Full Transfer/Full Access Hypothesis, the Failed Functional Features Hypothesis and the Local Impairment Hypothesis, in turn.

In order to distinguish between the “full access” and “partial access” views it is important to consider first the results of the advanced learners. These learners have acquired both the morphosyntax and the semantic implications associated with the features [\pm perfective] of AspP, with all aspectual classes of verbs. Except for sentences with achievement predicates in the Imperfect, in all other respects, the results of the advanced group were indistinguishable from those of the native speakers. In fact, with achievement predicates in the Imperfect tense, the

with accomplishments and achievements.

advanced learners behaved as predicted by the theoretical account assumed and tended to reject this particular combination of lexical class and tense, whereas the native speakers had a tendency to accept it.

We suggest that native speakers have access to aspectual “coercion” (DeSwart, 1998), a pragmatic process which provides a context to avoid a clash of semantic features. Coercion shifts the emphasis to the process immediately preceding the change of state, thus in a way turning achievements into accomplishments. For example, the achievement *reach the peak* takes but a moment. Still, English speakers accept the sentence *He was reaching the peak* to mean that the process leading to the actual reaching has been in progress at some time in the past. Even though English speakers coerce in English, and Spanish speakers do the same in Spanish, coercion might be peripheral to UG competence, and thus harder to acquire. That is, non-native speakers have the morphosyntactic and interpretative properties of AspP fully intact but, unlike native speakers, they might not have the pragmatic ability to coerce so as to avoid a conflict between the semantic features of lexical aspectual class (telic) and those of the aspectual tense (unbounded). The results of the advanced group do not appear to support the “partial access” nor the “no access” (Meisel, 1997) view of functional categories: features are neither impaired, as per the Local Impairment View (Beck, 1998; Eubank et al., 1997), nor limited to their L1 values, as predicted by the Failed Functional Features Hypothesis (Hawkins & Chan, 1997). Results support the “full access” view as evident in the Full Transfer/Full Access Hypothesis.

Is it likely that L2 learners emulate native-speakers behavior because they resort to other options supplied by their L1, as Hawkins & Chan (1997) suggest? The results of stative predicates are relevant to tease apart this possibility. Recall that accomplishments and achievements are compatible with the progressive tense in Spanish and English (*Pedro estaba*

ganando la carrera/ Peter was winning the race), and in this case the continuous meaning of the Imperfect and the Progressive overlap. Thus, it is conceivable that L2 learners have not indeed acquired the [- perfective] value of the formal feature in Spanish and appear to have knowledge of the semantic contrast between Preterite and Imperfect simply because they have mapped imperfect morphophonology onto the feature value [+ progressive] which they have available from English. If this were the case, then these learners would presumably have a different mental representation from that of native speakers.

However, the results of stative verbs clearly show that this possibility is unlikely due to the fact that stative predicates are incompatible with the Progressive tense in the two languages, and advanced learners have the perfective/imperfective contrast well-established with these verbs. Still, it is worth considering the possibility that learners are transferring the neutral value of the Simple Past in English with stative predicates, which can indeed have perfective or imperfective interpretations (*Mary was sick and is still sick/ Mary was sick and is no longer sick*). Unfortunately, this would leave unexplained how advanced learners are successful at mapping a presumed neutral value with two different morphological manifestations.

Furthermore, this account would not explain why many intermediate learners, who are supposed to rely more on their L1 knowledge than advanced learners, do not have the semantic contrast with states established. In order to get the semantic contrast with these verbs learners ought to map Imperfect morphology to the [-perfective] feature and Preterite morphology to the [+perfective] feature instantiated in AspP. We assume that this is indeed the case and suggest that advanced learners have the same mental representation as native speakers because they have successfully acquired the morpho-phonology-formal feature mapping.

We now turn to the results of the intermediate group to seek evidence supporting the FT/FA. These results show that there is a strong developmental relationship between the acquisition of the morphological paradigms of the Preterite and Imperfect tenses and their associated semantic interpretations. A first glance at this group suggests a clear developmental trend related to the acquisition of morphology: those who have NOT acquired the morphology have NOT acquired the semantic contrast between the tenses, and those who are deemed to know the morphology show signs, albeit weak, that the semantic contrast is emerging (in at least 20% of subjects). These subjects appear to be problematic for the position assumed, but in fact they are not.

There are two possible related explanations for why learners are more accurate with the morphology than with the semantic implications of the two tenses. One explanation has to do with the task used in this study to test knowledge of Preterite/Imperfect morphology. This was a typical classroom exercise in which subjects had to choose one of two options and there were few opportunities to make mistakes, as compared with a free conversation or elicited oral production task where subjects have to retrieve the correct form as they produce speech.

A second explanation is the context of acquisition. Several studies on the acquisition of tense/aspect morphology have indicated that while instructed and uninstructed learners go through the same developmental stages, instructed learners outperform uninstructed learners with the use of morphology at later stages (Bardovi-Harlig, 1992, 1995). This is because tense/aspect morphology is a prominent topic in any instructional intervention, and classroom learners usually receive extensive instruction and intensive drilling of verbal endings. In her study on the development of tense/aspect morphology in English, Bardovi-Harlig's (1992) findings suggest that the development of form *precedes* appropriate use. Learners provide morphological markers,

but sometimes in incorrect contexts. That is, fully grammatical forms emerge and are used by the learners before they carry target-like meaning. Therefore, it appears that, at least in this aspectual domain, not only does acquisition of morphological paradigms is related with the acquisition of their associated formal features, but these results also suggest that acquisition and *use* of Preterite/Imperfect morphology *precedes* acquisition of the semantic properties associated with these past tenses, at least with instructed learners.

Overall, the developmental trend documented in this study is compatible with the position we have assumed: the Full Transfer/Full Access Hypothesis (Schwartz & Sprouse, 1994, 1996; White, 1985). For this view functional categories and their associated feature values are present from the start because these transfer from the L1. Therefore, if AspP is instantiated in English there are compelling motivations to assume that it is already present in Spanish interlanguage. The reason why L2 learners do not yet get the semantic contrast is because, at the earliest stage, this functional category has only one value [+ perfective] and no contrast can be established without the [-perfective] value in place. Perhaps, acquisition of Imperfect tense morphology triggers acquisition of the feature value [-perfective], and once this feature is acquired the perfective/imperfective aspectual contrast appears to emerge in the interlanguage (although see Sprouse (1998) for an account that morphological paradigms by themselves do not necessarily trigger parameter resetting).

We conclude that the L1 is the initial state in L2 acquisition in the functional domain, that setting new parametric values through the acquisition of new formal features is fully possible in interlanguage grammars, and that the acquisition of overt Preterite/Imperfect morphology is correlated with the acquisition of the semantics of sentential aspect. Perhaps most importantly, the results of this study demonstrate that the acquisition of the Preterite/Imperfect contrast falls

within the range of UG phenomena and is not subject to a critical period effect, contrary to the claims of Coppieters (1987) based on data from French near-native speakers.

References

- Andersen, R. (1986). El desarrollo de la morfología verbal en el español como segundo idioma.” In J. Meisel (Ed.), Adquisición del lenguaje—Aquisição da linguagem. Frankfurt: Klaus-Dieter Vervuert Verlag.
- Bardovi-Harlig, K. (1992). The relationship of form and meaning: A cross-sectional study of tense and aspect in the interlanguage of learners of English as a second language. Applied Psycholinguistics 13, 253-278.
- Bardovi-Harlig, K. (1995). The interaction of pedagogy and natural sequences in the acquisition of tense and aspect. In F. Eckman, et al. (Eds.) Second Language Acquisition Theory and Pedagogy (pp. 151-168). Mahwah, NJ: Erlbaum.
- Beck, M.L. (1998). L2 acquisition and obligatory head movement: English-speaking learners of German and the local impairment hypothesis. Studies in Second Language Acquisition 20: 311-348.
- Bergström, A. (1995). The expression of past temporal reference by English-speaking learners of French. Unpublished Ph.D dissertation, The Pennsylvania State University.
- Borer, H. (1984). Parametric Syntax. Dordrecht: Foris.
- Bretz, M, T. Dvorak & C. Kirschner (1992). Pasajes: Lengua. 3rd edition. New York: Mc Graw Hill.
- Bybee, J. (1985). Morphology. A Study of the Relationship between Meaning and Form. Amsterdam/Philadelphia: John Benjamins.
- Chomsky, N. (1995). The Minimalist Program. MIT Press.
- Chung, S. & A. Timberlake. (1985). Tense, aspect, and mood. In T. Schopen (Ed.), Language Typology and Syntactic Description. Cambridge University Press.
- Comrie, B. (1976/1981/1985). Aspect. Cambridge, UK: Cambridge University Press.
- Coppieters, R. 1987. Competence differences between native and near-native speakers. Language, 63: 544-573.
- De Miguel, E. (1992). El aspecto en la sintaxis del español: Perfectividad e Imperfectividad. Madrid: Ediciones de la Universidad Autónoma de Madrid.
- Demirdache, H. & M. Uribe Etxebarria (1998). The primitives of temporal relations. In D. Michels, R. Martin & J. Uriagareka (Eds.) Essays in Honor of Howard Lasnik. Cambridge, MA: MIT Press.
- DeSwart, H. (1998). Aspect shift and coercion. Natural Language and Linguistic Theory, 16, 2: 347-385.
- Duffield, N., White, L. Bruhn de Garavito, J, Montrul, S. & P. Prévost. (in preparation). Clitic placement in L2 French and Spanish: Evidence from sentence matching.
- Epstein, S., S. Flynn, and G. Martohardjono (1996) Second Language Acquisition: theoretical and experimental issues in contemporary research. Brain and Behavioral Sciences 19: 677-758.
- Eubank, L. (1993/1994). On the transfer of parametric values in L2 development. Language Acquisition 3: 183-208.
- Eubank, L. (1994). Optionality and the initial state in L2 development. In T. Hoekstra & B. Schwartz (Eds.), Language Acquisition Studies in Generative Grammar (pp. 369-388). Amsterdam: John Benjamins.
- Eubank, L., Bischof, J., Huffstutler, A., Leek, P. & West, C. (1997). “Tom eats slowly cooked eggs”: Thematic verb-raising in L2 knowledge. Language Acquisition 6: 171-199.

- Gavruseva, E. & D. Lardiere. (1996). The emergence of extended phrase structure in child L2 acquisition. In Stringfellow, A. Cahana-Amitay, D., E. Hughes, & A. Zukowski (eds.) BUCLD 20 Proceedings, 223-36.
- Giorgi, A. & F. Pianesi, (1997). Tense and Aspect: From Semantics to Morphosyntax. Oxford University Press.
- Grondin, N. & L. White. (1996) Functional categories in L2 acquisition of French. Language Acquisition 5: 1-34.
- Hasbún, L. (1995). The role of lexical aspect in the acquisition of the Tense/Aspect system in L2 Spanish. Unpublished PhD dissertation. Indiana University, Bloomington.
- Hawkins, R. & C. Chan (1997). The partial availability of Universal Grammar in second language acquisition: the 'failed functional features hypothesis'. Second Language Research 13,3: 187-226.
- Haznedar, B. & B. Schwartz (1997). Are there optional infinitives in child L2 acquisition? In Hughes, E., Hughes, M. and Greenhill A., (Eds.). BUCLD 21 Proceedings. Somerville, MA: Cascadilla Press, 257-268.
- Hernanz, M. (1991). Spanish absolute constructions and aspect. Catalan Working Papers in Linguistics 4: 45-92.
- Kaplan, M. (1987). Developmental patterns of past tense acquisition among foreign language learners of French. In B. Van Patten (Ed.), Foreign Language Learning: A Research Perspective. Rowley, MA: Newbury House.
- Lafford, B. (1996). The development of tense/aspect relations in L2 Spanish narratives: Evidence to test competing theories. Paper presented at SLRF' 96, Tucson, Arizona.
- Lakshmanan, U. & L. Selinker. (1994). The status of CP and the tensed complementizer *that* in developing L2 grammars of English. Second Language Research 14: 1-26.
- Lardiere, D. (1998a) Case and Tense in the fossilized steady state. Second Language Research 14: 1-26.
- Lardiere, D. (1998b). Dissociating syntax from morphology in a divergent end-state grammar. Second Language Research 14: 359-375.
- Liskin-Gasparro, J. (1997). The acquisition of temporality in Spanish oral narratives: Exploring learners' perceptions. Paper presented at the AAAL' 97, Orlando, Florida.
- Meisel, J. (1997). The acquisition of the syntax of negation in French and German: contrasting first and second language acquisition. Second Language Research 13: 227-263.
- Olsen, M. (1999). A Semantic and Pragmatic Model of Lexical and Grammatical Aspect. New York: Garland.
- Pollock, J-I. (1989). Verb Movement, Universal Grammar, and the structure of IP. Linguistic Inquiry 20: 365-424.
- Prévost, P. & L. White (in press). Accounting for Morphological Variation in L2 Acquisition: Truncation or Missing Inflection? In M.A. Friedemann & L. Rizzi (Eds.) The Acquisition of Syntax: Issues in Comparative Developmental Linguistics. London: Longman.
- Ramsay, V. (1990). Developmental stages in the acquisition of the perfective and imperfective aspect by classroom L2 learners of Spanish. Unpublished PhD dissertation, University of Oregon.
- Salaberry, R. (1997). The development of Spanish Past Tense aspect among adult academic L2 learners. Unpublished PhD dissertation, Cornell University, Ithaca, NY.
- Salaberry, R. (1998). The development of aspectual distinctions in classroom L2 French. Canadian Modern Language Review 54, 4: 508-42.

- Salaberry, R. (1999). The development of Past tense verbal morphology in classroom L2 Spanish. Applied Linguistics 20, 2: 151-178.
- Schmidt, R. & S. Frota. (1986) Developing basic conversational ability in a second language: A case study of an adult learner of Portuguese. In R. Day (Ed.) Talking to Learn: Conversation in Second Language Acquisition. Rowley, MA: Newbury House.
- Schmitt, C. (1996). Aspect and the syntax of noun phrases. Unpublished PhD dissertation, University of Maryland, College Park.
- Schwartz, B. & R. Sprouse, R. (1994). Word Order and nominative case in nonnative language acquisition: a longitudinal study of (L1 Turkish) German interlanguage. In T. Hoekstra & B. Schwartz (Eds.), Language Acquisition Studies in Generative Grammar (pp. 317-368). Amsterdam: John Benjamins.
- Schwartz, B. & Sprouse, R. (1996). L2 cognitive states and the Full Transfer/Full Access Model. Second Language Research 12, 40-72.
- Slabakova, R. & S. Montrul (in preparation). Aspectual tenses in Spanish L2 acquisition: A UG perspective.
- Smith, C. (1991/1997). The Parameter of Aspect. Dordrecht: Kluwer.
- Smith, N. & I. Tsimpli. (1995). The Mind of a Savant: Language Learning and Modularity. Oxford: Blackwell.
- Sprouse, R. (1998). Some notes on the relationship between inflectional morphology and parameter setting in first and second language acquisition. In M. Beck (Ed.) Morphology and its Interface in Second Language Knowledge (pp. 41-68). Philadelphia: John Benjamins.
- Tenny, C. (1994). Aspectual Roles and the Syntax-Semantics Interface. Dordrecht: Kluwer.
- Travis, L. (1991). Inner Aspect and the Structure of VP. Cahiers de Linguistique, 132-46.
- Tsimpli, I. & N. Smith. (1991). Second language learning: evidence from a polyglot savant. UCL Working Papers in Linguistics 3, 171-84.
- Tsimpli, I. & Roussou, A. (1991). Parameter setting in L2? UCL Working Papers in Linguistics 3: 149-169.
- Vainikka, A. & M. Young-Scholten. (1994). Direct access to X'-theory: evidence from Korean and Turkish adults learning German. In T. Hoekstra & B. Schwartz (Eds.), Language Acquisition Studies in Generative Grammar (pp. 265-316). Amsterdam: John Benjamins.
- Vainikka, A. & Young-Scholten, M. (1996). Gradual development of L2 phrase structure. Second Language Research 12: 7-39.
- Vendler, Z. (1967) Linguistics in Philosophy. Ithaca, NY: Cornell University Press.
- Verkuyl, H. (1993) A Theory of Aspectuality: The Interaction Between Temporal and Atemporal Structure. Cambridge: Cambridge University Press.
- Wexler, K. & R. Manzini (1988). Parameters and Learnability in Binding Theory. In T. Roeper & E. Williams (Eds.) Parameter Setting. Dordrecht: Reidel.
- White, L. (1996). Clitics in L2 French. In Clahsen, H. (Ed.) Generative Perspectives on Language Acquisition: Empirical Findings, Theoretical Considerations, Crosslinguistic Comparisons (pp. 335-368). Amsterdam: John Benjamins.
- White, L. (1985). The pro-drop parameter in adult second language acquisition. Language Learning 35: 47-62.
- Wiberg, E. (1996). Reference to past events in bilingual Italian-Swedish children of school age. Linguistics 34: 1087-1114.

Zagona, K.(1994). Compositionality of aspect: evidence from Spanish aspectual se. In C. Parodi, C. Quicoli, M. Saltarelli & M. Zubizarreta (Eds.) Aspects of Romance Linguistics. Selected Papers from the LSRL XXIV. Washington, D.C: Georgetown University Press.