

Assessing the effect of lexical aspect and grounding on the acquisition of L2 Spanish past tense morphology among L1 English speakers*

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The present study compares the relative effect of inherent lexical aspect and discursive grounding on the use of L2 Spanish Preterit and Imperfect. The study is based on the analysis of responses to a written 40-item discourse-based forced-choice task among 286 English-speaking learners of Spanish. The analysis of data (repeated measures ANOVA) reveals that as learners gain more experience with the target language, the effect of both lexical aspect and grounding on past tense marking increases. That is, contrary to previous predictions, learners constantly move towards prototypical associations of lexical-narrative factors with morphological markers as knowledge of the second language increases. Second, grounding is the construct that most clearly distinguishes learners from native speakers.

Keywords: aspect, lexical aspect, discourse, L2 acquisition

1. Introduction

There have been several hypotheses proposed for the analysis of development of tense-aspectual meanings in L2 (second language) acquisition spanning a range of explanatory phenomena covering semantic, discursive, cognitive and syntactic factors. The most researched hypothesis so far has been the Lexical Aspect Hypothesis (LAH). The main claim advanced by the LAH is that “first and second language learners will initially be influenced by the inherent semantic aspect of verbs or predicates in the acquisition of tense and aspect markers associated with or affixed to these verbs” (Andersen & Shirai, 1994, p. 133; see also Andersen, 1986, 1991; Robison, 1990). That is, the use of past tense inflectional markers reaffirms primarily the lexical aspectual value of the verb phrase, and secondarily conveys information about tense or grammatical aspect. A second hypothesis, the Discourse Hypothesis (DH), predicts that “learners use emerging verbal morphology to distinguish foreground from background in narratives” (Bardovi-Harlig, 1994, p. 43). Thus, both the LAH and the DH claim that learners START OUT marking past tense with the inflectional endings that are semantically associated with lexical aspect or grounding

(i.e., prototypical choices), and that they gradually incorporate non-prototypical choices as their experience with the L2 increases (e.g., Andersen, 1994; Tracy, 2007).¹ Several L2 empirical studies have provided evidence in support of the claim proposed by the LAH (e.g., Bardovi-Harlig, 1992a; Camps, 2002, 2005; Collins, 2002, 2004; Comajoan, 2001, 2006; Hasbún, 1995; Salaberry, 1998; Shirai & Kurono, 1998) and the DH (e.g., Bardovi-Harlig, 1992b, 1995; Comajoan, 2001, 2005; Giacalone-Ramat, 2002; Housen, 1994, 2002; López-Ortega, 2000; Noyau, 1990).² However, fewer empirical studies have compared the relative validity of the claims of the LAH and the DH (exceptions are, e.g., Bardovi-Harlig, 1998; Comajoan, 2001, 2005; Comajoan & Pérez Saldanya, 2005; Güell, 1998; Lafford, 1996; López-Ortega, 2000).

In the present paper I analyze empirical evidence to compare the relative effect of inherent lexical aspect and discursive grounding on the use of L2 Spanish Preterit (PRET) and Imperfect (IMP). The analysis of data will lead to two main conclusions. First, both lexical aspect and grounding have an increasing effect on past tense

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¹ The prototypes are semantic in nature (e.g., Li & Shirai, 2000; Shirai & Andersen, 1995). Li and Shirai (2000, p. 66), for instance, point out that the “semantic representation of tense-aspect morphology . . . is restricted to the prototype of the morphological category”.

² There are, however, several studies that have presented data that contradict the claim about the maximum effect of lexical aspect during the beginning stages of acquisition (Lubbers-Quesada, 1999, 2007; Pérez-Leroux et al., 2007; Salaberry, 1999, 2002, 2003, 2005; Wiberg, 1996).

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marking as learners gain more experience with the target language. Instead of a decrease in the association of lexical aspect and grounding with past tense marking – as proposed by the LAH and the DH, respectively – learners constantly move towards prototypical associations as their knowledge of the language increases. Second, lexical aspect and grounding are in a hierarchical relationship in which grounding is the factor that most closely approximates the representation of aspect (see Smith, 1997). That is, grounding conveys a broader perspective than lexical aspect about the aspectual meaning of a text.

The paper is organized as follows. In the next section, I present a brief description of the representation of tense and aspect in Spanish and English, and I discuss some of the challenges posed by the acquisition of the aspectual meanings conveyed by Preterit-Imperfect in L2 Spanish. In the third section, I review the constructs of lexical aspect and narrative grounding as possible predictors of the development of tense-aspectual knowledge in the L2. In section 4, I briefly review some of the empirical evidence about the LAH and the DH. In section 5, I describe the findings of a study based on the analysis of responses to a written 40-item discourse-based forced-choice task among 286 English-speaking learners of Spanish. Finally in section 6, I discuss the outcome of the present study in the context of the theoretical claims about the explanatory value of lexical aspect and narrative grounding as determinants of past tense marking in L2 Spanish among L1 English speakers.

2. Tense and aspect marking in Spanish

Comrie (1976) argues that aspect is concerned with situation-internal time (focus on internal temporal constituency), whereas tense is relative to situation-external time (focus on points on the timeline). From this perspective, aspect – unlike tense – is not a deictic category because it is not relative to the time of the utterance. Some theorists, however, define both tense and aspect in deictic terms (e.g., Doiz-Bienzobas, 1995; Klein, 1994). Klein, for instance, proposes that any given utterance is composed of a non-finite component and a finite component. The former represents a selective description of a situation generally associated with a predicate and its arguments and even adverbials (i.e., lexical content), whereas the latter refers to the time for which the claim about the situation has been made (i.e., morphosyntactic marking). This time is labeled Topic Time. Thus, to define aspect, we can ask questions such as: Is the Topic Time going to comprise the whole event, thus making it bounded (perfective)? Or, alternatively, will the selected Topic Time be defined by an unbounded description of the same event (imperfective)?

For instance, in sentence (1a) Topic Time is located after the completion of the event of eating an apple, thus

the event is bounded. In contrast, in sentence (1b), Topic Time occurs sometime after the first bite, but before the last bite that completes the event of eating the apple; thus the event is unbounded.

- (1) a. Julián comió (PRET) una manzana. [bounded]
 “Julián ate an apple.”
 b. Julián comía (IMP) una manzana. [unbounded]
 “Julián ate/was eating an apple.”

2.1 Spanish Preterit and Imperfect: Boundedness

In Spanish, aspectual contrasts are obligatorily marked in past tense only. Thus, past tense inflectional morphology indicates both tense (past) and aspect (perfective or imperfective): The Preterit encodes perfective aspect and past tense, whereas the Imperfect encodes imperfective aspect and, in most cases,³ past tense, as the examples (1a, b) above show. In its most prototypical use, the Preterit encodes boundedness (i.e., closure of an event) and the Imperfect encodes unboundedness (cf. Depraetre, 1995). The aspectual distinction of boundedness marked with Preterit and Imperfect in Spanish may possibly be conveyed with the contrast of the Simple Past and the Past Progressive in English as shown in the translation of (2).

- (2) Julián comía (IMP) una manzana, cuando llegó (PRET) Lucas.
 “Julián was eating an apple, when Lucas arrived.”

This association between English Past Progressive and the Spanish Progressive is, however, misleading. First, the Spanish Imperfect covers a broader range of aspectual notions than the Progressive in English. Note that the example above is only useful to translate cases in which the Imperfect describes an action in progress that is being contrasted with another event. In turn, to convey the meaning of habituality that Spanish expresses with the use of the Imperfect, English lexicalizes habitual aspect in the past with the use of verbs such as *would* or *used to*, as sentences (3a, b) show. As is additionally shown in (3b), Spanish also has a periphrastic option equivalent to English *used to* that is used to convey habituality, the so-called defective verb *soler*.

- (3) a. Cuando era (IMP) niño, Julián **comía** (IMP) manzanas todos los días.
 “When Julián was a child, he would eat/used to eat/ate apples every day.”

³ As pointed out by Silva-Corvalán (personal communication, May 17, 2009), some exceptions are represented by conditional clauses (*Si pudiera te ayudaba* “If I could, I would help you”) and reported clauses (*Dijo que venía mañana* “S/he said s/he would come tomorrow”).

- b. Cuando era (IMP) niño, Julián **solía** (IMP) comer manzanas todos los días.
 “When Julián was a child, he would eat/used to eat/ate apples every day.”

Second, the Imperfect can be freely used with any lexical aspectual class, whereas the Past Progressive in English is not prototypically used with stative verbs. Notice that in the following example the meaning contrast conveyed by the Preterit-Imperfect with the stative verb *estar* “to be” is not as easy to translate into English:

- (4) Ayer estuve (PRET)/estaba (IMP) deprimida.
 “Yesterday I was depressed.”

In general, the Simple Past in English corresponds to the Spanish Preterit when the verbs are eventive (non-stative):

- (5) Lucas fue (PRET) a la universidad.
 “Lucas went to campus.”
- (6) Julián construyó (PRET) un barco.
 “Julián built a boat.”

The aspectual meaning of the use of the English Simple Past with statives is equivalent to the use of Spanish Imperfect with statives. That is, in both cases the state may or may not have reached an end (Montrul & Salaberry, 2003).

- (7) a. Lucas estaba (IMP) enfermo y todavía lo está.
 “Lucas was sick and he still is (sick).”
- b. Lucas estaba (IMP) enfermo, pero ya no lo está más.
 “Lucas was sick, but not anymore.”

On the other hand, because the English Simple Past is regarded as a tense rather than as an aspectual marker, it conveys the meaning of perfectivity (i.e., boundedness) in a pragmatically “cancelable way” (e.g., Ziegeler, 2007). Thus, sentences (8a, b) show that the state of being sick may still be going on at speech time. In Spanish, in contrast, the aspectual perfective meaning is not pragmatic but rather grammatical, thus it cannot be pragmatically canceled as shown by (8a) (based on examples from Montrul & Salaberry, 2003).

- (8) a. *Lucas estuvo (PRET) enfermo y todavía lo está.
 “Lucas was sick, and he still is sick.”
- b. Lucas estuvo (PRET) enfermo, pero ya no lo está más.
 “Lucas was sick, but he is no longer sick.”

In English, the “discontinuity of the past state is only pragmatically implied, which can be cancelled by an added qualification” (Ziegeler, 2007, p. 1021). With eventive verbs in English, such as in (9), however, such cancellation cannot occur because the reference to the completed event is grammatically encoded. Thus, the cancellation of an

already completed telic event is ungrammatical in both English and Spanish.

- (9) *Lucas completó el manuscrito y todavía lo está completando.
 “*Lucas finished the manuscript and he is still finishing it.”

As also noted by Ziegeler (2007, p. 1023), English does not have two representational meanings associated with the Simple Past (i.e., aspectual and tense meanings), but rather “one prototypical use that is likely to have related to its historical development (perfectivity), and . . . any non-prototypical uses are extensions via pragmatic inferencing (past temporality)”.

2.2 *Spanish Preterit and Imperfect: More than boundedness*

The range of meanings conveyed by the contrastive use of the Preterit-Imperfect in Spanish is broader than the simple distinction according to boundedness presented above. The Preterit and Imperfect may also convey more specific aspectual contrasts such as habituality versus iterativity, genericity versus specificity, and property versus actual occurrence (e.g., Doiz-Bienzobas, 1995; Montrul & Salaberry, 2003; Pérez-Leroux, Cuza, Majzlanova & Sánchez-Naranjo, 2007; Slabakova & Montrul, 2003, 2007). The analysis of these additional phenomena is beyond the scope of this paper, but I will describe one example to substantiate the claim about the overall differences between languages.

In Spanish, the distinct notions of habituality and iterativity are contrasted through grammatical means: habituality is conveyed with the use of the Imperfect (10), whereas iterativity is conveyed with the use of the Preterit (11). In contrast, in English, habituality may be formally conveyed with periphrases such as *used to* and *would*, but it can also be represented with the Simple Past, as in (10). Iterativity, on the other hand, is normally represented in English with the Simple Past Tense only, as shown in sentence (11).

- (10) Cuando era (IMP) niño, jugaba al fútbol. [habitual]
 “When I was a child, I played/used to play soccer.”
- (11) Por años, jugué (PRET) al fútbol. [iterative]
 “For years, I played soccer.”

In sum, although both Spanish and English mark aspectual distinctions, the acquisition of Spanish past tense marking among English speakers is challenging because the morphosyntactic marking of aspectual contrasts in English is not equivalent to the use of the Spanish Preterit-Imperfect in Spanish.

3. Learning to mark past tense aspect in L2 Spanish

3.1 Lexical aspect

Most definitions of aspectual meanings postulate a division of aspectual phenomena into two levels that we can define as (inherent) lexical aspect and grammatical aspect proper. For instance, Smith (1997, p. 2) explicitly states that “[t]he aspectual meaning of a sentence results from interaction between two independent aspectual components, situation type and viewpoint”.⁴ The concept of a division of verbal predicates into lexical aspectual classes (or situation types per Smith’s label) is well established in the literature (e.g., Dowty, 1986; Smith, 1997; Tenny 1994; Vendler, 1967; Verkuyl, 1989, 1993). The following descriptions of verbal categories follow Comrie’s (1976) revision of Vendler’s constructs:

- States: no input of energy, undifferentiated period (e.g., *to be, to have, to want*)
- Activities: arbitrary beginning and end point (process), successive stages (e.g., *to run, to walk, to breathe*)
- Accomplishments: durative and inherent end point (e.g., *to write a novel, to build a house, to make a chair*)
- Achievements: inherent end point, but no duration (punctual) (e.g., *to notice something/someone, to realize something, to reach the peak*)

It is important to note that the classification of lexical aspectual classes based on the inherent semantic meaning of the verbal predicate alone is an oversimplification. There are other components associated with the verbal predicate that contribute to the aspectual interpretation of verb classes. Verkuyl (1972) was the first to explicitly argue that verb complements had an effect on the characterization of verb classes, and that aspect is compositional. At a minimum, most researchers agree on the important effect of internal arguments (objects), many also agree on the role played by external arguments (subjects), and some even consider the role of adjuncts (adverbials) (e.g., Olsen, 1997) as contributing to the determination of lexical aspectual classes.

It is also relevant to note that several researchers argue for a more streamlined classification of lexical aspectual classes according to three categories. Thus, while some continue to uphold Vendler’s four lexical

aspectual classes (e.g., Michaelis, 2004; Rothstein, 2004), others have reduced Vendler’s four-way classification into a tripartite distinction by collapsing accomplishments and achievements into a single category of telic events (e.g., de Swart, 1998; Dowty, 1986; Filip, 1999; Klein, 1994; Tenny, 1994; Verkuyl, 1993). In fact, even empirical data from L2 acquisition studies show that durativity is not a relevant semantic factor (e.g., Bardovi-Harlig & Bergström, 1996; Collins, 2002). Collins, in particular, reports that her L2 English data (gathered among L1 French speakers) did not reveal any “significant differences between accomplishments and achievements in the use of simple past” (p. 82). In the study reported here, I will rely on the three-way classification of lexical aspectual classes that considers both accomplishments and achievements as part of a single class of telic events.

3.2 Grounding

The textual structure of discourse has also been regarded as a powerful predictor of the use of aspectual distinctions across languages (e.g., Givón, 1982; Hopper, 1982; Reinhart, 1984; Vet & Veters, 1994; Wallace, 1982). In this respect, what most researchers have identified is that eventualities can be differentially emphasized according to various textual contrasts. Wallace (1982), for instance, argues that the contrast of FIGURE AND GROUND in textual structure is part of an innate, universal, perceptual distinction. And Hopper (1982, p. 16) argues that the nature of aspectual distinctions in languages like French (or Spanish for that matter) cannot be characterized by semantics in a consistent way; the adequate reference may only come from a GLOBAL DISCOURSE FUNCTION.

Reinhart (1984) lists the temporal and textual criteria that mark the notion of foreground: narrativity (only textual/narrative units can serve as foreground), punctuality (punctual events serve more easily as foreground), and completeness (completed events serve more easily as foreground). Bardovi-Harlig (1995) also considers the feature of “newness” (new information is more relevant for the foreground). Bardovi-Harlig explains further that the foreground is functionally simple (it moves the narrative forward), whereas the background is functionally complex. The background may recount sequential events on a time line distinct from the one used for the main event in focus, or that they are not in sequence with the foregrounded events as they are used to provide information about descriptions, motivation, evaluation, etc. For our purpose, we note that the perfective–imperfective aspectual distinction is directly associated with the marking of foregrounded and backgrounded material in a narrative respectively. This tight association between a narrative functional device and grammatical

⁴ As pointed out by Andersen (2002, p. 99), situation aspect corresponds to lexical aspect whereas viewpoint aspect is equivalent to grammatical aspect.

form becomes a good “rule of thumb”, so to speak, for learners.⁵

3.3 Lexical aspect and grounding on a continuum of aspectual meanings

Several researchers have proposed – directly or indirectly – that the effects of lexical aspect and grounding are, in fact, two manifestations of a single construct: a continuum of aspectual meanings (e.g., Andersen, 2002; Comajoan & Pérez Saldanya, 2005; Doiz-Bienzobas, 1995; Salaberry, 2008). For instance, Comajoan and Pérez Saldanya (2005, p. 47) propose that telicity, foreground, perfectivity on the one hand; and atelicity, background, and imperfectivity, on the other hand, should be regarded as “two bundles of prototypical features, whereas the combination of features from one and the other would be considered nonprototypical”. That is, whenever the aspectual meanings conveyed by lexical aspect and grounding coincide (e.g., telic verbs in the foreground), we obtain a prototypical selection of grammatical marking (i.e., Preterit). In contrast, when the aspectual meaning conveyed by narrative grounding does not match the aspectual semantic features of lexical aspect (e.g., non-dynamic verbs in the foreground), we obtain a non-prototypical choice of grammatical marking (i.e., Preterit).

The fact that the information provided by both lexical aspect and grounding are necessary to determine the aspectual meaning of the verbal predicate (e.g., prototypical or not) leaves unanswered the question of a possible hierarchical relationship between lexical aspect and grounding in which the former may be embedded in the latter (i.e., sentence level within text level). In this respect, Andersen (2002, p. 99) argues that Smith’s (1997) situation aspect contains “a number of contributing factors to what I prefer to call *interpreted aspect*, that is the interpretation a conversational participant or hearer gets or takes from the overall content of a speaker’s discourse”. For instance, Andersen explains that adverbial expressions (e.g., *all the time, all summer long, last Sunday*) “have a wider scope beyond the clause and sentence” (p. 99). In other words, our construal of the aspectual meaning of a verb will be constrained or expanded by the temporal meaning contributed by the above-mentioned adverbials (i.e. Andersen’s interpreted aspect). Once we incorporate the role of adverbials, it is clear that our definition of aspect is rather broad. The identification of the properties that help us conceptualize a given verb in terms of grounding must be a broadly contextualized process.

⁵ For the purpose of this paper, I will not take into account the meaning conveyed by the perfective–imperfective contrast in association with its use in specific sections (text-structure) of a narrative (Silva-Corvalán, 1983, 1986).

3.4 Hierarchical ordering of lexical aspect and grounding

The most pertinent evidence to substantiate the claim that the definition of aspect needs to be broadly contextualized comes, ironically, from studies that have used decontextualized sentences as prompts to assess the informants’ selections of grammatical markers. In those studies, native speakers seem to rely on the use of some level of broadly contextualized information, even if the latter is not explicitly mentioned. For instance, Coppieters (1987) compared the language competence of native and near-native speakers of French with regards to the use of *PASSÉ COMPOSÉ* (PC) and *IMPARFAIT* (IMPF) with decontextualized sentences of the following type:

- (14) a. J’ai très souvent mangé (PC).
 “I ate very often.”
 b. Je mangeais (IMPF) très souvent.
 “I would eat very often.”

Coppieters judged the results of his test sentences on the basis of homogeneity of responses only, because both sentences above are grammatically valid (as is the case in the equivalent translations in Spanish as well). Given the fact that native speakers were more homogeneous than non-native speakers in their responses, Coppieters claimed that the *Passé Composé* and *Imparfait*

do carry some information; but, by and large that same information CAN READILY BE EXTRACTED FROM THE CONTEXT, and does not need to be explicitly expressed through grammatical means. In such circumstances, it may be difficult (particularly one whose native language does not formally mark the category or distinction in question) TO SEPARATE CONTEXTUAL FROM GRAMMATICAL INFORMATION. (Coppieters, 1987, p. 567; emphasis added)

The distinction that Coppieters made between contextual and grammatical information conveyed by tense-aspectual morphemes in French has been described by Binnick (1991) as a distinction between contextually-determined uses (i.e., in the context of a larger piece of discourse) and invariant meanings (e.g., iterativity, boundedness, genericity) of the perfective–imperfective distinction. Following Binnick’s claim, Doiz-Bienzobas (1995, p. 29) argues that the “contextual uses of the imperfect and the Preterit are instantiations of their general [invariant] meanings”. For instance, in sentence (15), the verb *llegar* “to arrive” conveys the invariant meaning of boundedness in its default value (bounded as opposed to unbounded). In contrast, the same verb used in sentence (16) acquires a distinct contextualized meaning (i.e., habituality) that shifts the default meaning of a bounded eventuality to an unbounded one.

- (15) El tren llegó tarde (PRET).
“The train arrived.”
- (16) Cuando era (IMP) niño, el tren llegaba (IMP) tarde.
“When I was a child, the train arrived late.”

In sum, narrative grounding includes a broader range of information about aspectual meanings than lexical aspect (i.e., text level as opposed to verb-phrase or sentence level). Furthermore, L2 learners may differ in their use of tense-aspectual markers from native speakers due to factors associated with the learners' limited access to information about contextualized uses of aspectual morphology (cf. Coppeters heterogeneity of responses).

4. Comparative studies of the LAH and the DH

Few studies have explicitly compared the predictions of the LAH and the DH. Part of the reason for the dearth of contrastive studies is that, as Bardovi-Harlig (1994, p. 286) states, the predictions of each approach “may be too fine-grained for a study of interlanguage”. More specifically, the criteria used to distinguish foreground versus background information overlaps with some of the principled criteria that serve to classify verb phrases into different lexical aspectual classes. For instance, foregrounded events are determined by temporal criteria that include reference to punctuality and completeness. Thus, the events in the foregrounded parts of a narrative are punctual (as opposed to durative or iterated) and dynamic (as opposed to stative). The opposite is the case for backgrounded eventualities: they are non-dynamic (states) or durative (atelic events).

One of the few studies that purposefully set out to compare the predictions of the LAH and the DH on the use of Spanish Preterit and Imperfect is Lafford's (1996), who analyzed oral retells of a seven-minute silent video (*The Sorcerer's Apprentice* from Disney). The data were collected from thirteen L2 Spanish students from three different levels of intermediate proficiency (Intermediate-low, Intermediate-mid- and Intermediate-high based on the ACTFL-OPI scale). There were no cases of telic verbs in the background of the narratives for the Intermediate-low and Intermediate-mid learners and very few tokens among the Intermediate-high learners. Moreover, in the foreground of the narrative, the Imperfect was not used whereas the Preterit was used across all verb types. Lafford concluded that her data provided evidence in favor of the strong version of the DH: both atelic and telic verbs were marked with the Preterit in the foreground section of an oral narrative. That is, grounding overrides telicity (at least in the foreground). Another study that specifically compared the effect of lexical aspect and grounding on the use of L2 Spanish past tense in the same data set was López-Ortega (2000). Her analysis was based

on narratives collected through personal interviews with four Arabic/French speakers learning Spanish in Spain. López-Ortega concluded that the LAH and the DH are “necessary and complementary frameworks of analysis”. More importantly, in apparent contrast with the findings from Lafford, López-Ortega tentatively concluded that “lexical aspect may play a relevant role in overriding other temporal reference and discourse principles occasionally when the three (grammatical aspect, lexical aspect, and grounding) do not agree with native distributions” (p. 499).

Finally, Comajoan and Pérez Saldanya (2005) specifically reviewed the empirical evidence from Comajoan's (2001) dissertation to ascertain whether the LAH or the DH would be a more encompassing hypothesis. The analysis was based on L2 Catalan longitudinal data collected from six L1 English speakers who already had “extensive knowledge of other Romance languages” (p. 47).⁶ Comajoan and Pérez Saldanya concluded that in the prototypical combinations, the perfective form (a periphrastic past in Catalan) in the foreground was used appropriately within a range of 97–100% across lexical aspectual classes. On the other hand, the Imperfect forms in the background were used appropriately 92–97%, except for achievements (73%). Interestingly, however, there was not a clear outcome in favor of either lexical aspect or grounding. For instance, the highest level of past tense use with states occurred both in the foreground and the background, thus negating the categorical role of grounding as an explanatory factor (though not necessarily ruling it out). On the other hand, states were marked with the perfective form at approximately the same level as other lexical aspectual classes, thus contradicting the claim about lexical aspectual class as a categorical determinant of past tense use.

The relatively few studies on the possible relative influence of lexical aspect or grounding do not allow us to gather any categorical conclusions. Thus, several researchers have advocated a more substantive empirically-based comparative analysis of the claims of the LAH and the DH. Bardovi-Harlig (2000, pp. 335–336), for instance, stated that “the investigation of either one alone provides only a partial picture of interlanguage tense–aspect use” because the influence of lexical aspect interacts with narrative structure. Slabakova (2002, p.186) also called for the type of comparative analysis of the claims of the LAH and the DH as conducted on the acquisition of L2 English by Bardovi-Harlig (1998). Finally, Comajoan (2005, p. 73) explicitly stated that “further research needs to isolate morphology

⁶ Unlike the studies of Lafford or López-Ortega, the data from Comajoan and Pérez Saldanya were based on percentages of appropriate use.

use from discourse grounding in L2 and investigate more specifically their relationship". Given the lack of sufficient evidence on the comparative effect of lexical aspect and discursive grounding on the use of L2 past tense marking, the present study sets out to compare the effect of both factors on the use of Spanish Preterit and Imperfect.

5. The present study

5.1 Hypotheses

Following previous studies, the present one is based on the assumption that lexical aspect and narrative grounding are two distinct types of semantic information that underlie the selection and use of past tense markers in Spanish. Thus, the following research hypotheses guide the present study:

1. Based on the claim of the LAH, lexical aspect will be directly associated with the choice of past tense marker. At one end of the spectrum of lexical aspect, states tend to be marked with the Imperfect, whereas at the other end, telic events tend to be marked with the Preterit.
2. Based on the claim of the DH, grounding will be directly associated with the choice of past tense marker. Foregrounded events are marked with the Preterit and backgrounded events are marked with the Imperfect.
3. Based on the claims of both the LAH and the DH, both lexical aspect and grounding will have the highest degree of association with past tense marking during the beginning stages of development. Furthermore, the association between lexical aspect and grounding with the use of Preterit and Imperfect will gradually decrease as proficiency in the L2 increases.
4. Based on theoretical reasons (i.e., grounding is correlated with the broad meaning of viewpoint aspect) and empirical findings (i.e., Coppeters, 1987; García & vanPutte, 1988; Lafford, 1996), grounding – as a determinant of the use of Preterit and Imperfect in L2 Spanish – will be more difficult than lexical aspect for learners to incorporate into their developing system.

5.2 Participants

The participants in the study were divided into five groups according to their level of proficiency in Spanish: four groups of learners (286 English-speaking learners of Spanish) and one group of 149 monolingual native speakers of Spanish. The learners were all college-level students enrolled in Spanish language courses at a major public research university in the US. The classification of the learners' level of proficiency according to their course placement is justified for two reasons. First, all students entering the normal sequence of courses take

Table 1. *Distribution of participants according to proficiency in Spanish.*

Group	N	Score 30-item DELE
2nd semester	52	11.6
3rd semester	117	13.8
4th semester	85	14.3
5th semester	32	19.7
Native speakers	149	N/A

a placement test (Wisconsin Test), ensuring a minimum level of homogeneity within and across levels. Second, immediately before the study took place all students enrolled in Spanish language courses took a diagnostic test based on an adapted version of the DELE (*Diploma de Español como Lengua Extranjera*).⁷ The distribution of scores according to course level for all students registered in Spanish is summarized in Table 1.⁸

Although only an indirect indication of level of proficiency for the participants in the study, the scores confirm a minimum level of separation between levels of proficiency.⁹ The native speakers represented two different regional varieties (54 from Mexico and 95 from Uruguay), but there were no statistically significant differences between their responses. All native speakers completed the task in their home country. Both native speakers and students participated voluntarily in the experiment.

5.3 Methodology

The data on the use of past tense marking in L2 Spanish were collected with the use of a written 40-item discourse-based forced-choice task (Appendix A). The text used in the present study was a modified version of a native speaker's narrative of a cartoon produced by a popular cartoonist (Lavado, 1986). All participants received both the narrative and the cartoon. The modifications of the narrative were mostly restricted to vocabulary items that might have impeded the understanding of the text by the less proficient learners. Other changes were made to maintain a good balance of verbs according to the different classes of grounding and lexical aspect whenever possible. The advantages (and limitations) of a controlled test for the collection of data on tense-aspect marking

⁷ This test has been used in previous studies of L2 acquisition (e.g., Slabakova & Montrul, 2002, 2007), and thus its use in the present study ensures a minimum degree of comparability with previous studies.

⁸ The test was administered outside of the scope of the current project and it encompassed all students taking these courses (not just the participants in the study).

⁹ The test scores were confidential and were provided to the researcher as aggregate data only, thus a statistical analysis was not possible.

are discussed in detail in Bardovi-Harlig (2000).¹⁰ For the purpose of this study, the selected testing instrument was justified because the control over the distribution of classes of lexical aspect and levels of grounding is necessary for a comparative analysis. Moreover, the larger data set collected through a controlled task allows for the use of more powerful statistical tests than the ones used in previous studies (i.e., repeated measures ANOVA as opposed to Chi Square).

The 40 verbs selected as the measure for the dependent variable were classified according to lexical aspectual class and grounding. The classification was first done by the author, and later sent to three additional raters who were asked to confirm or modify the author's categorization. All four raters were native speakers of Spanish and had extensive experience with the classifications of lexical aspect and grounding. All raters were asked to make their judgments about lexical aspect on the operational tests devised by Hasbún (1995) and Shirai (1991), and for grounding they used the criteria set forth by Reinhart (1984) as described in Bardovi-Harlig (2000). Sample tests are listed in Appendix B.¹¹ The cases that created discrepancies were re-classified by the author so that at least three out of the four raters (including the author) were in agreement.¹²

The tests used to classify lexical aspect have been used in numerous previous studies; thus, for reasons of space I will not discuss them in further detail. However, given that not many studies have used tests of narrative grounding, I will provide a brief description of the application of these tests to the first paragraph of the story excerpted below. (Foregrounded text is flushed right; see Appendix A for the English translation. The main verbs are in bold and numbered in the order presented in the passage.)

Ayer **1 (fui – iba)** a visitar la antigua casa de mi abuelo.

2 (Fue – Era) la casa en la que **3 (pasé – pasaba)** muchas horas felices de mi infancia. La casa **4 (estuvo – estaba)** abandonada, pero todavía **5 (tuvo – tenía)** muchos recuerdos de las veces que **6 (visité – visitaba)** a mi abuelo.

Table 2. Target verbs classified according to lexical aspectual classes and grounding.

Lexical aspect	Background	Foreground	Total
Stative	10	4	14
Atelic events	9	2	11
Telic events	5	10	15
Total	24	16	40

Al entrar **7 (vi – veía)** la mecedora y de inmediato **8 (me acordé – me acordaba)** de las veces

cuando mi abuelo **9 (me hamacó – me hamacaba)** y mi mamá **10 (tomó – tomaba)** té. **11 (Fue – Era)** una época maravillosa.

First, we note that the outcome of the combined classification of all raters determines that the verb phrases 1, 7 and 8 are part of the foreground of the story, whereas 2–6 and 9–11 are part of the background of the narrative (text flushed left). In effect, the eventualities represented by verb phrases 1, 7 and 8 serve to advance the plot line of the main story (“I went (to visit) the house, I saw something, I remembered something”). These three events move the story forward and are, in essence, the basic information needed to understand the rest of the story. At the same time, all three events comply with the conditions of punctuality and completeness: visiting, seeing and remembering are neither ongoing nor durative events. In contrast, verb phrases 2–6 as well as 9–11 provide a narrative flashback to the time of the main character's childhood. This flashback effectively breaks the story line with the addition of non-chronological eventualities. These non-chronological events are either habitual (non-punctual), or simply descriptive in nature.

The distribution of lexical aspectual classes according to grounding is summarized in Table 2. Note that the proportion of background clauses to foreground clauses is higher than in typical simple-plot fictional narratives analyzed in previous studies. The higher proportion of backgrounded clauses is probably due to two factors: (i) the content of the story itself in which the main character remembers several events from his childhood, and (ii) the fact that the narrator was asked to play the role of the main character (a personalized story according to Bardovi-Harlig, 2000).

On the other hand, in terms of lexical aspectual classes, there is a slightly higher proportion allocated to the two ends of the continuum of lexical semantics (i.e., states and telic events). With regards to the distribution of lexical aspectual classes according to grounding, there are two important factors to consider in the analysis. First, there is an inverse distribution of the two ends of the continuum of lexical aspect (i.e., states and telic events) according

¹⁰ One important disadvantage of controlled studies is that written texts are essentially monologic in nature. That is, the presence of an interlocutor during a natural conversation leads to the creation of a co-constructed discourse (e.g., feedback channels, scaffolding). Another obvious disadvantage is that a controlled test with a fixed passage does not incorporate possible differences among speakers with reference to the weight assigned to specific verb types (do they use telic verbs preferentially?) or grounding (do they create elaborate background sections?).

¹¹ Given that the study considered only three lexical aspectual classes, only two tests were necessary to classify verb phrases.

¹² The cases where there were disagreements were items 10 (*ser*), 20 (*ser*) and 30 (*jugar*). Please see Appendix A for details.

to grounding: 10 telic events versus four states in the foreground as opposed to five telic events and 10 states in the background. This distribution is, however, typical of most narratives, a factor that is also confirmed by the apparent overlap of the predictions made by the LAH and the DH. Second, the distribution of activity verb types is lopsided to the extent that most activity verbs show up in the background of the narrative (nine cases) as opposed to the foreground (two cases).

With regard to the relative distribution of specific verb types within each lexical aspectual class, two of the most frequently used statives represented almost two thirds of the verbs in that class. That is out of 14 states, seven corresponded to the verb *ser* “to be”, three to the verb *estar* “to be”, two to *querer* “to want” and there was also one example each of the verbs *haber* “to be (existential)” and *tener* “to have”. Within the class of telics, there was a more even distribution: there were three instances of the verb *ir* “to go”, and two each of the verbs *atar* “to tie” and *ver* “to see”. The remaining nine telic verbs were all represented by different verb types.

6. Results

The number of tokens collected for the present study comprised 16,915 responses from 435 participants. There were 485 empty cells that represented selections not made by the participants (representing less than 3% of the total number of responses). Furthermore, the empty cells were evenly distributed according to level of native speakers and non-native speakers, lexical aspectual class and grounding. For instance, even the most obvious candidate for a special type of patterning of the empty cells (i.e., native versus non-native speakers) was not apparent: 404 empty cells corresponded to choices made by non-native speakers, whereas 81 empty cells corresponded to choices made by native speakers. Given that even native speakers left some options unselected, it is logical to conclude that the limited number of empty cells (3%) was very likely associated with an instrument effect (e.g., participants may have missed an option while reading the text) and not necessarily due to the effect of any of the independent variables.

The experimental design of the study was based on a repeated measures analysis with a between-subjects factor (level of proficiency) and a 3×2 factorial design for the within-subject analysis (3 lexical aspectual classes \times 2 levels of narrative grounding). The three lexical aspectual classes were states, atelic events and telic events. The two levels of grounding corresponded to foreground and background. The dependent variable was represented by the selection of past tense marker as measured on a continuous scale from 0 (Preterit) to 1 (Imperfect). All analyses were run using the statistical package SPSS 14.0.

Table 3 presents the average scores for each one of the 40 items in the test for each one of the levels of proficiency.

Mauchly’s test of sphericity of the within subject factors determined that there is no violation of sphericity for aspect (0.218).¹³ Grounding was not affected by sphericity given that it has only one degree of freedom. The interaction of aspect and grounding, however, violates the sphericity assumption (0.042), thus requiring the application of the Greenhouse-Geisser correction, which rendered an adjusted degrees of freedom of 1.970 for lexical aspect, 1.939 for the interaction of aspect and grounding, and 7.756 for the interaction of type, ground and level. For the between-subject factors, the results of the ANOVA with repeated-measures did not reveal a significant main effect for level of proficiency [$F(4, 199) = 2.268, p = .063$].¹⁴ On the other hand, the analysis of the results of the within-subject factors revealed significant main effects for lexical aspect [$F(1.970, 392) = 39.007, p = .000$] and grounding [$F(1, 199) = 381.946, p = .000$]. More importantly, the analysis revealed significant two way interaction effects between aspect and level [$F(7.880, 392) = 10.887, p = .000$], grounding and level [$F(4, 199) = 30.536, p = .000$], and aspect and grounding [$F(1.939, 385.847) = 21.653, p = .000$], and also three-way interaction effects between level, aspect and grounding [$F(7.756, 385.847) = 6.505, p = .000$]. Even though there are no significant differences across proficiency levels in the between-subject analysis, there are interaction effects of proficiency level in association with the two main independent variables in the within-subject analysis. Thus, we conclude that the various proficiency groups have different patterns of performance with reference to the variables of lexical aspect and grounding. Figures 1 and 2 below show the mean scores for the effect of lexical aspect and grounding, respectively. In both figures the effect of the independent variables (lexical aspect and grounding) are separated according to level of proficiency.

¹³ The assumption of sphericity is an assumption about homogeneity of variance between pairs of conditions (i.e. repeated tests). Sphericity is violated when the differences between pairs of conditions have unequal variances.

¹⁴ The degrees of freedom used in the computation of the statistical analysis have been reduced due to the listwise deletion of cases with empty cells. The default technique for handling missing data by SPSS is to remove the entire case from an analysis even if one single cell is empty (i.e., casewise or listwise deletion). The alternative option of using pairwise deletion of missing data (effectively keeping cases with some missing cells instead of deleting them completely) is not appropriate because the parameters of the model will be based on different sets of data, with different sample sizes and different standard errors (Allison, 2001). Casewise deletion is preferred in this case because the power of the test is not compromised. That is, the power of the statistical measure for the present analysis is adequate given that the minimum of 204 cases provides plenty of power for the computation of the F-statistic.

Table 3. Mean scores for all proficiency groups (from 2nd to 5th semester of instruction plus native speakers) according to grounding and lexical aspect (0 = Preterit, 1 = Imperfect).

Item	Grounding	Aspect	2nd	3rd	4th	5th	Native
1	Foreground	TELIC	.12	.14	.01	.10	.01
2	BACKGROUND	State	.63	.65	.73	.74	.43
3	BACKGROUND	Activity	.73	.78	.86	.77	.09
4	BACKGROUND	State	.60	.59	.68	.77	.84
5	BACKGROUND	State	.69	.75	.76	.84	1.00
6	BACKGROUND	Activity	.65	.77	.79	.87	.49
7	Foreground	TELIC	.15	.23	.11	.10	.01
8	Foreground	TELIC	.29	.15	.12	.03	.01
9	BACKGROUND	Activity	.73	.86	.94	.97	.84
10	BACKGROUND	Activity	.71	.82	.87	.94	.95
11	BACKGROUND	State	.81	.66	.73	.74	.31
12	Foreground	State	.25	.33	.26	.16	.07
13	Foreground	Activity	.62	.43	.50	.39	.02
14	Foreground	TELIC	.29	.22	.14	.03	.01
15	BACKGROUND	State	.58	.52	.74	.71	.91
16	BACKGROUND	TELIC	.60	.69	.80	.94	.84
17	BACKGROUND	TELIC	.44	.50	.68	.81	.91
18	BACKGROUND	Activity	.54	.61	.70	.84	.91
19	BACKGROUND	Activity	.77	.78	.87	.84	.99
20	BACKGROUND	State	.77	.84	.80	.84	.17
21	Foreground	State	.37	.42	.46	.35	.03
22	Foreground	TELIC	.21	.20	.08	.06	.01
23	BACKGROUND	State	.42	.47	.62	.58	.96
24	BACKGROUND	Activity	.71	.77	.80	.84	.91
25	BACKGROUND	TELIC	.63	.67	.71	.71	.91
26	BACKGROUND	Activity	.67	.75	.86	.81	.93
27	BACKGROUND	State	.63	.75	.75	.77	.93
28	BACKGROUND	State	.63	.76	.70	.84	.95
29	BACKGROUND	TELIC	.50	.62	.56	.65	.81
30	BACKGROUND	Activity	.56	.77	.86	.87	.85
31	BACKGROUND	TELIC	.52	.73	.65	.74	.81
32	Foreground	State	.29	.29	.24	.19	.05
33	Foreground	TELIC	.17	.16	.06	.13	.02
34	Foreground	Activity	.27	.28	.15	.26	.03
35	Foreground	TELIC	.10	.18	.11	.03	.02
36	Foreground	TELIC	.35	.14	.11	.06	.02
37	BACKGROUND	State	.40	.43	.38	.65	.91
38	Foreground	TELIC	.31	.22	.27	.19	.03
39	Foreground	TELIC	.29	.15	.15	.16	.02
40	Foreground	State	.37	.31	.35	.58	.95

Note: Both states and activities are atelic.

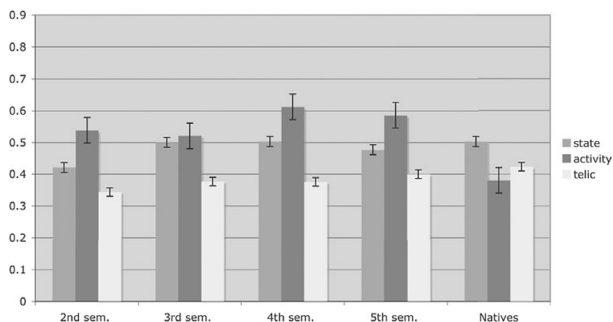


Figure 1. Distribution of scores according to LEXICAL ASPECT by level of proficiency.

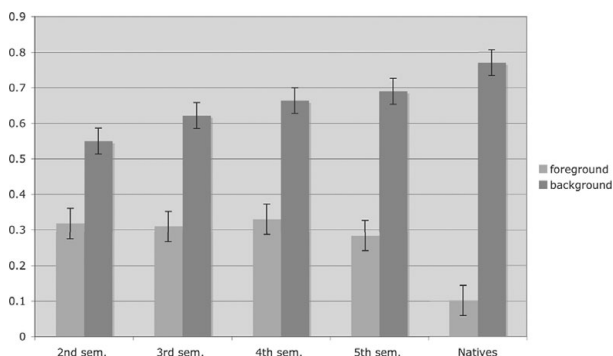


Figure 2. Distribution of scores according to GROUNDING by level of proficiency.

Table 4. Two-way significant interaction effects by lexical aspect decomposed.

Aspect	Significant comparisons		
	by proficiency level	Std. error	Significance
States	None	None	None
Activity	Native speakers vs. 2nd semester	.035	.000
	Native speakers vs. 3rd semester	.027	.000
	Native speakers vs. 4th semester	.034	.000
	Native speakers vs. 5th semester	.042	.000
	None	None	None
Telic event	None	None	None

The interaction effects were further decomposed. A summary of the statistically significant comparisons for the interaction effects of level and aspect and level and grounding is presented in Tables 4 and 5, respectively.

For the interaction between aspect and level (Table 4), the only significant difference is given by the contrast between the native speakers and all groups of learners in association with activities only. That is, native speakers categorically preferred the use of the perfective form,

Table 5. Two-way significant interaction effects by grounding decomposed.

Grounding	Significant comparisons		
	by proficiency level	Std. error	Significance
Foreground	Native speakers vs. 2nd semester	.037	.000
	Native speakers vs. 3rd semester	.029	.000
	Native speakers vs. 4th semester	.037	.000
	Native speakers vs. 5th semester	.045	.001
	None	None	None
Background	Native speakers vs. 2nd semester	.036	.000
	Native speakers vs. 3rd semester	.029	.000
	Native speakers vs. 4th semester	.036	.034
	None	None	None

whereas learners were more likely to use the imperfective form. There are no significant differences across groups for the analysis of grammatical marking with states or telic events. In contrast, the analysis of the interaction between grounding and level (Table 5) shows a statistically significant difference between native speakers compared to all groups of learners in association with the use of grammatical markers of past tense in the foreground of the narrative, and also a statistically significant difference between native speakers and all learners but the ones in the 5th semester in association with the use of grammatical markers of past tense in the background of the narrative. That is, native speakers were more likely to use the Preterit in the foreground and the Imperfect in the background. In sum, of the two independent variables (aspect and grounding), it appears that grounding is the one that more clearly distinguishes the performance of native speakers compared to learners.

A summary of the analysis of the statistically significant comparisons present in the three-way interaction effect is presented in Table 6 below. The clearest pattern of statistically significant differences is associated with telic events: both in the foreground and the background of the narrative, native speakers differ in their use of past tense from learners from 2nd, 3rd and 4th semesters. That is, both native speakers and 5th semester learners are more likely than 2nd, 3rd and 4th semester learners to use the perfective form in the foreground and, concurrently, the imperfective form in the background.

The next clearest pattern of statistically significant results is associated with activities in the background in which case there is a statistically significant difference

Table 6. Three-way significant interaction effects decomposed.

Aspect	Grounding	Significant comparisons by proficiency level	Std. error	Significance
States	FOREGROUND	Native speakers vs. 3rd semester	.042	.022
States	Background	Native speakers vs. 2nd semester	.039	.000
		Native speakers vs. 3rd semester	.031	.000
Activity	FOREGROUND	None	None	None
Activity	Background	2nd semester vs. 4th semester	.051	.014
		2nd semester vs. 5th semester	.059	.039
		2nd semester vs. native speakers	.041	.006
Telic event	FOREGROUND	Native speakers vs. 2nd semester	.035	.000
		Native speakers vs.3rd semester	.028	.000
		Native speakers vs.4th semester	.035	.000
Telic event	Background	Native speakers vs.2nd semester	.064	.000
		Native speakers vs.3rd semester	.051	.000
		Native speakers vs.4th semester	.063	.002

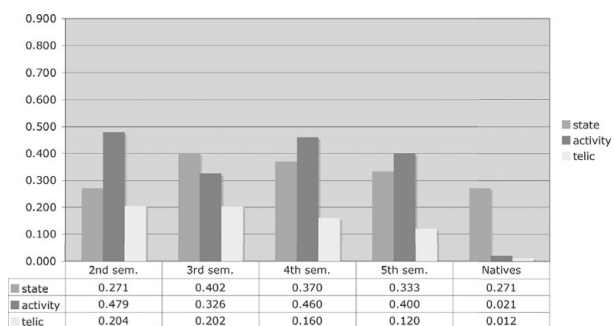


Figure 3. Distribution of scores (FOREGROUND) with interaction effects.

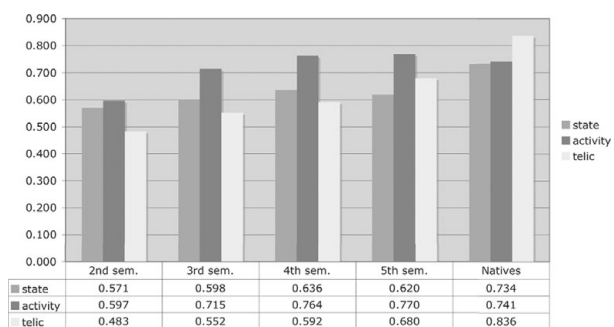


Figure 4. Distribution of scores (BACKGROUND) with interaction effects.

between 2nd semester learners and the 4th and 5th semester students as well as the native speakers. That is, 2nd semester learners are more likely than other groups (except for 3rd semester students) to use the perfective form with activities in the background of the narrative. Figures 3 and 4 show the effects of lexical aspectual classes for each level of grounding separately.

Table 7. Differential scores for verb type according to grounding (background scores – foreground scores).

Group	States (1)	Atelic events (2)	Telic events (3)	All three combined
2nd semester	.300	.118	.279	=.232
3rd semester	.195	.389	.350	=.311
4th semester	.266	.304	.432	=.334
5th semester	.287	.370	.560	=.405
Native speakers	.463	.720	.825	=.610
Range	.163	.602	.546	=.378

To further analyze the effect of grounding across the various groups, Table 7 below shows the differential scores (means) between foreground and background for each lexical aspectual class separately and for all three lexical aspectual classes combined for all groups of subjects.

As the differential score increases, the association of grammatical marker (Preterit or Imperfect) with grounding (Foreground or Background) becomes more important. Concomitantly, as the gap between foreground and background becomes smaller, we conclude that the distinction according to grounding is less relevant for the selection of past tense marker. Table 7 shows that the differential scores of the dependent variable according to grounding were categorically marked among native speakers (or at least much more so than any other learner group). This is especially true for non-states: for atelic events the gap between 2nd semester learners and native speakers was 0.602 and for telic events the gap between 2nd semester learners and native speakers was 0.546 (both measured on a 1.0 range). For states, the range in differences is minimal: 0.163, although still higher for native speakers than for any other group of learners.

Table 8. *Categorical selection of Preterit-Imperfect by proficiency in Spanish.*

	2nd	3rd	4th	5th	Native
Categorical choices	6/40	10/40	19/40	25/40	37/40
Percentage of total	18%	25%	48%	62%	93%

Furthermore, the analysis also shows a fairly constant increase in the differential scores as proficiency and experience with the language increases. That is, there is a clear developmental pattern.

A final analysis of the data was conducted on the means for each separate item of the total of 40 that comprised the narrative. The analysis by item is useful to understand whether specific groups were more categorical than others in their choices of Preterit and Imperfect. That is, the more categorical the answer for a specific group is, the more homogenous their responses are (cf. Coppieters, 1987). For instance, if two different groups had each an average of 0.5 (in between Imperfect and Preterit) for the selections assigned to two separate items, there is a continuum of possible combinations of two scores that can produce the average of 0.5. In one hypothetical case, the average of 0.5 can represent two equal scores of 0.5 (a tendency to be ambivalent about the selections of Preterit-Imperfect). In another hypothetical scenario, however, the average of 0.5 may be the result of the combination of two categorically opposite selections (0 and 1). For the purpose of identifying categorical selections, the average scores of 0.8 or higher (categorical selection of Imperfect) and 0.2 or lower (categorical selection of Preterit) for all 40 items across groups were counted. Table 8 presents the number of items below 0.2 or above 0.8 for all groups of learners along with the percentage of categorical choices for the total of 40 items included in the narrative.

There is a gradual transition towards more categorical choices of Preterit and Imperfect as experience/proficiency in the L2 increases (from 18% for second semester learners up to 93% for native speakers). Not surprisingly, the group of native speakers was by far the one that was most homogeneous in their responses, whereas non-native speakers were more ambivalent about their selections (cf. Coppieters, 1987).¹⁵ Following the

¹⁵ Nevertheless, native speakers were ambivalent about their selection of past tense marker with three verbs (out of a total of 40 verbs, thus less than 7%), namely items 2, 6 and to some extent 11. Items 2 and 11 denoted states (*ser* “to be”) in the background, whereas item 6 denoted an activity (*visitar* “to visit”) also in the background. The selection of the two state verbs in particular is not entirely surprising. That is, in both cases, the speaker is free to select the specific

previous finding, the average scores by item were also analyzed to identify possible non-prototypical choices of combinations of lexical aspect and grounding (e.g., states in the foreground, telic events in the background). In this case, if we consider the concept of telicity only (telic events as opposed to atelic events and states), there are 10 items in which we have a non-prototypical pairing of lexical aspect and grounding; see Tables 9 and 10.

Note that all of the telic events that native speakers categorically marked with the Imperfect (items 16, 17, 25, 29 and 31) were also part of backgrounded clauses in the narrative (non-prototypical).¹⁶ In contrast, except for the case of items 16 and 17 among 5th semester learners, non-native speakers do not show a categorical marking of telic events with the Imperfect. Conversely, all of the atelic events that native speakers categorically marked with the Preterit (items 12, 13, 21 and 32) were part of the foregrounded clauses in the narrative (also non-prototypical). The only exception to the latter trend was provided by item 40, in which the lexical aspect of the stative prevailed and led to the use of the Imperfect. In contrast, by and large, non-native speakers do not categorically mark statives with the perfective form. In sum, native speakers’ selections of non-prototypical choices tend to be affected by grounding. Thus, grounding is the factor that overrides the effect of lexical aspect to mark situations non-prototypically.

7. Discussion

The analysis of data presented in the previous section leads to the following conclusions. First, we provide an affirmative answer to the questions posed by both research hypotheses 1 and 2: both lexical aspect and grounding are directly associated with the choice of past tense marker across all levels of proficiency in Spanish. Furthermore, we provide a negative answer to research question 3: lexical aspect and grounding do not reach their highest degree of association with past tense marking during the beginning stages of development. On the contrary, the association between lexical aspect and grounding with the use of Preterit and Imperfect gradually increases as proficiency in the L2 increases. Finally, research question 4 is answered positively, as the data show that grounding is the construct that most clearly distinguishes learners from native speakers. Whereas the answers to research questions 1 and 2 reaffirm previous findings, the answers to research questions 3 and 4 contradict previous proposals

Topic Time (Klein, 1994) that is appropriate, thereby arriving at two different but possible linguistic renderings of the same situation.

¹⁶ In the present study, learners selected one of two grammatical markers. I will, however, use the term “marking” as synonymous with selection.

Table 9. Distribution of mean scores in non-prototypical uses for all groups according to proficiency in Spanish.

Item	Grounding	Aspect	2nd	3rd	4th	5th	Native
12	FOREGROUND	State	.25	.33	.26	.16	.07
13	FOREGROUND	Activity	.62	.43	.50	.39	.02
16	Background	TELIC	.60	.69	.80	.94	.84
17	Background	TELIC	.44	.50	.68	.81	.91
21	FOREGROUND	State	.37	.42	.46	.35	.03
25	Background	TELIC	.63	.67	.71	.71	.91
29	Background	TELIC	.50	.62	.56	.65	.81
31	Background	TELIC	.52	.73	.65	.74	.81
32	FOREGROUND	State	.29	.29	.24	.19	.05
40	FOREGROUND	State	.37	.31	.35	.58	.95

Table 10. Distribution of Preterit-Imperfect in non-prototypical uses for native speakers.

Lexical/Grammatical	Imperfect	Preterit
Telic events	16, 17, 25, 29, 31	[Prototypical]
Stative	[Prototypical]	12, 13, 21, 32

and, thus, they constitute the more interesting findings of the present study.

With reference to question 3, the effect of either lexical aspect or narrative grounding on the dependent variable (i.e., Preterit or Imperfect) does not have a noticeable effect in the comparison of subjects grouped according to proficiency in Spanish (from 2nd semester to native speakers). Thus, all learners are aware of the biases associated with specific types of verbs (as defined by lexical aspect) and grounding (as defined by foreground and background) for the selection of past tense marking in Spanish. In principle, these findings seem to provide empirical support for the LAH and the DH: the use of Spanish Preterit and Imperfect is associated with lexical aspect and grounding. This conclusion, however, is unwarranted to the extent that these data show that neither the effect of lexical aspect nor the effect of grounding is restricted to the beginning stages of acquisition.

In fact, the statistically significant interactions between, on the one hand, level of proficiency and grounding, and, on the other hand, level of proficiency and lexical aspect reveal that the pattern of use of the information provided by lexical aspect and grounding is NOT the same across the groupings of subjects represented in this study. Indeed, Figure 1 shows that as language competence (given by level) goes up, the use of the Preterit in association with the telic events increases, whereas the use of the Imperfect in association with states also increases. Similarly, Figure 2 shows that as proficiency increases, the use of the Preterit in association with the

foreground of the narrative increases, whereas the use of the Imperfect in association with the background of the narrative also increases. Interestingly, previous studies had provided preliminary evidence of this trend. By and large, the studies that proposed an initial stage of development represented by a default past tense marker are in consonance with the findings of the present study (e.g., Lubbers-Quesada, 1999; Salaberry, 1999, 2002, 2003; Wiberg, 1996). In fact, even data from some studies that do not explicitly advocate a default past tense marker substantiate this position as well (e.g., Camps, 2002, 2005; Güell, 1998; Pérez-Leroux et al., 2007).¹⁷

In fact, Andersen (2002, p. 92) pointed out that “learners increase the strength of association of a particular meaning and distribution of a gram [grammatical form] each time another token is encountered”. Furthermore, Shirai (2004, p. 103) argued that “in cross-sectional studies involving production data, the prototypical association becomes *stronger* as the learner’s proficiency increases”. How can we theoretically account for this clear contradiction with the basic claim advanced by the LAH and the DH? Shirai suggested that “the increasing association is the result of developing form–meaning mapping based on L2 input, which is biased in the direction predicted by the . . . Distributional Bias Hypothesis” (p. 103). In fact, Tracy’s (2007) analysis of a corpus of Spanish native speakers’ written and oral data shows that many verbs are clearly biased towards the Preterit or Imperfect approximately 70% of the time.

¹⁷ For instance, the analysis of cloze-test data from Güell shows that native speakers categorically prefer the use of the Preterit in foregrounded clauses and the Imperfect in backgrounded clauses. Interestingly, however, the least advanced learners favored the use of the Preterit over the Imperfect across all clauses, including the narrative background. Furthermore, the same data reveal a clear developmental trend in the proportional use of the Preterit-Imperfect with the Imperfect increasingly being used to mark backgrounded clauses.

For instance, she argues that when the verb *estar* “to be” is used with adjectives (e.g., *estar enamorado* “to be in love”), it is typically marked with the Imperfect. In contrast, when it is used with prepositional phrases and/or specific time references (e.g., *estar con un amigo* “to be with a friend”), it tends to be used with the Preterit. The argument about distributional biases raises the distinct probability that it is not only semantics per se, but also particular frequencies and patterning of input data that guide L2 learners towards an ever-increasing native-like competence. This is a claim that, although compatible with the LAH (as pointed out by Andersen, 2002), does bring up questions about the possibility that to a great extent the effect of lexical aspectual classes on past tense marking is actually, indirectly, the effect of distributional biases (i.e., a cognitive factor as opposed to a strictly linguistic one).

With reference to hypothesis 4, the findings of the present study reveal that the construct of grounding (rather than lexical aspect) is the one that most systematically distinguishes learners from native speakers (with the single exception of the data from the background of the narrative among 5th semester students). In contrast, the only statistically significant pattern of interaction between native speakers and learners with regard to the effect of lexical aspect is the one associated with activities (atelic events), which, in effect, is the least informative category of the continuum of lexical aspectual classes.¹⁸ The conclusion that grounding is the more significant factor of the two is further substantiated by the statistically significant three-way interactions when both grounding and lexical aspect are analyzed concurrently. Thus, given the paucity of research on the potential effect of lexical aspect versus grounding on the use of past tense morphology among L2 learners, the answer to the questions posed by hypothesis 4 proves to be the most revealing of the questions posed in the present study.

The clearest pattern that serves to distinguish native from non-native speakers is associated with telic events in both the foreground and the background of the narrative. Interestingly, native speakers are the most categorical in marking telic events with the Preterit in the foreground (a prototypical choice), at the same time that they categorically mark TELIC EVENTS WITH THE IMPERFECT IN THE BACKGROUND (a non-prototypical choice). The only exception to this trend is the group of 5th semester

¹⁸ By and large, native speakers are more likely to use the perfective with activities than any learner group. The fact that the only significant difference in the effect of lexical aspectual classes shows up in the category of activities is not necessarily surprising. We need to consider two important factors: (i) the strongest determinants of lexical aspect are the opposite ends of the continuum (i.e., states and telic events), and (ii) activities represent a “shifty” category of verbal predicates inherently defined by many optional arguments and adjuncts that can be added through context (see Dowty, 1986; Olsen, 1997; Smith, 1997). In sum, activities are ambiguous in terms of their perceived telicity.

learners who pattern in their selections with native speakers. The least proficient learners are not yet marking TELIC verbal predicates with grammatical markers in association with grounding as much as they mark them in association with lexical aspect. In fact, the same trend is also representative of the selection of past tense markers associated with states (although not statistically significant as the association with telic events). That is, native speakers (as well as 4th and 5th semester students) mark STATES WITH THE PRETERIT IN THE FOREGROUND (a non-prototypical choice), at the same time that they tend to mark states with the Imperfect in the background (a prototypical choice). In sum, native speakers’ choices tend to be more consistently affected by grounding (both foreground and background) than the learners’ choices.

Why would lexical aspect have a stronger effect than narrative grounding on the responses of L2 learners? As discussed in previous sections, narrative grounding represents, by definition, a factor that includes a rather broader level of contextualization than lexical aspect. In principle, the more expansive horizon of contextual elements that needs to be considered to make selections of Preterit-Imperfect according to grounding brings about a more challenging task for L2 learners (cf. Coppieters, 1987; García & vanPutte, 1988). The challenge is predicated on the additional elements introduced by a large contextual framework that may modify the use of prototypical choices. Indeed, Andersen (2002, p. 92; emphasis added) proposed that

it may be that all learners, whether of first or second languages, must begin with prototypical associations and then GRADUALLY EXPAND THEIR REPERTOIRES AS THE DEMANDS OF MORE COMPLEX DISCOURSE REQUIRE, including less prototypical constructions

Non-prototypical choices are most likely to be found in more (rather than less) contextualized environments. In fact, the analysis of categorical choices (Tables 8–10) revealed that native speakers’ selections of non-prototypical choices are determined by the factor of grounding, but not lexical aspect. In other words, grounding is the factor that overrides the effect of lexical aspect to mark situations non-prototypically. In sum, lexical aspectual classes (and distributional biases) lead learners to use morphosyntactic markers of Spanish past tense in association with prototypical meanings. For non-prototypical choices to be identified and marked morphologically, a broad level of contextualization (inherently linked with narrative grounding) needs to be taken into account.

Finally, I note that the analysis of categorical choices of past tense marking made by native speakers and learners (Table 8) introduces yet another factor of theoretical importance. That is, whereas native speakers make clear choices of Preterit or Imperfect (93% of

verbs are categorically marked with either morphological marker), non-native speakers seem to be ambivalent about the right choice (from a minimum of 18% to a maximum of 62%). This finding replicates the results from Coppieters (1987) and further substantiates his argument that the acquisition of knowledge about tense-aspectual morphology represents a challenging task for L2 learners, a component of the L2 perhaps never acquired completely. On the other hand, it is important to note that there is a gradual increase in categorical choices in the data from 2nd semester (18%), to 3rd semester (25%) to 4th semester (48%) and, finally to 5th semester (62%). Thus, in principle, learners move towards making similar selections made by native speakers on the basis of a broader aspectual context. It is open to question whether this gradual improvement will be asymptotic in nature.

In conclusion, the present study substantiates the claim advanced by both the LAH and the DH that lexical aspect and grounding have AN EFFECT AT SOME POINT on the development of past tense aspectual marking in L2 Spanish among L1 English speakers (see Robison, 1990). On the other hand, the present findings contradict the basic tenet of the lexical aspect hypothesis and the discourse hypothesis to the extent that the role of lexical aspect and grounding actually INCREASES with proficiency in the L2. Finally, the most important finding of the present study is that grounding was the more challenging of the two levels of representation of aspectual meanings. In sum, the results empirically substantiate the need to include the role of contexts wider than the verb-phrase level and the sentence level to define the representational knowledge of tense-aspectual contrasts. That is, the decision about which past tense form to use in Spanish (i.e., Preterit or Imperfect) is associated with a global (contextualized) understanding of the situation to be represented in linguistic terms.

Appendix A. Narrative text of Quino's cartoon

The structure of the narrative has been classified according to grounding for the purpose of this paper: flushed left is text describing backgrounded events and flushed right is text describing foregrounded events. Participants received the text all flushed left. All verbs are numbered consecutively and they are bolded. Participants received the text with all sentences flushed left (irrespective of grounding) and the verbs were not bolded (but they were numbered consecutively).

This is a narrative of the cartoon. Please underline or circle the correct option for each verb.

Ayer **1 (fui – iba)** a visitar la antigua casa de mi abuelo.

2 (Fue – Era) la casa en la que **3 (pasé – pasaba)** muchas horas felices de mi infancia. La casa **4 (estuvo – estaba)** abandonada, pero todavía **5 (tuvo – tenía)**

muchos recuerdos de las veces que **6 (visité – visitaba)** a mi abuelo.

Al entrar **7 (vi – veía)** la mecedora y de inmediato **8 (me acordé – me acordaba)** de las veces

cuando mi abuelo **9 (me hamacó – me hamacaba)** y mi mamá **10 (tomó – tomaba)** té. **11 (Fue – Era)** una época maravillosa.

En ese momento **12 (quise – quería)** ver el resto de la casa. Así es que **13 (continué – continuaba)** caminando por la casa y **14 (vi – veía)** un carrito.

15 (Fue – Era) el carrito al que **16 (até – ataba)** a mi abuelo. Él **17 (hizo – hacía)** el papel de caballo y me **18 (llevó – llevaba)** por la casa, mientras mi papá **19 (leyó – leía)** el periódico. ¡Ah! **20 (Fueron – Eran)** años de infancia hermosos.

Entonces **21 (quise – quería)** explorar más y **22 (fui – iba)** al altillo

en el que **23 (hubo – había)** ropa de indio y un arco con flechas. Cuando **24 (visité – visitaba)** a mi abuelo **25 (me puse – me ponía)** la ropa de indio y **26 (jugué – jugaba)** con mi abuelo. Él **27 (fue – era)** mi prisionero y yo **28 (fui – era)** un indio armado con arco y flecha. Lo **29 (até – ataba)** a una columna del altillo y **30 (jugamos – jugábamos)** por horas y horas hasta que **31 (se hizo – se hacía)** de noche.

32 (Fue – Era) en ese momento que me **33 (di cuenta – daba cuenta)** de que la última vez que **34 (jugué – jugaba)** con él, **35 ¡(me olvidé – me olvidaba)** de desatarlo! **36 (Fui – Iba)** a buscarlo

donde **37 (estuvo – estaba)** aquella columna.

38 (Subí – Subía) las escaleras a toda prisa, y entonces **39 (encontré – encontraba)** a mi abuelo.

¡Qué horror! Allí **40 (estuvo – estaba)** el esqueleto de mi abuelo atado a la columna.

Approximate translated version follows below. The Preterit and Imperfect options in the original have been translated with the past tense marker in English, given that this is the most accurate translation of the original.

Yesterday [I] **1 (went)** to visit my grandfather's old house. [It] **2 (was)** the house where [I] **3 (spent)** a lot of time having fun as a kid. The house **4 (was)** abandoned, but [it] still **5 (had)** many memories of the times when [I] **6 (visited)** my grandfather. Upon entering [I] **7 (saw)** the rocking chair and [I] immediately **8 (remembered)** the

times when my grandfather **9 (rocked me)** and my mother **10 (drank)** tea. [That] **11 (was)** a wonderful time.

At that precise moment, [I] **12 (wanted)** to see the rest of the house. So, [I] **13 (continued)** walking around the house and [I] **14 (saw)** a cart. [It] **15 (was)** the little cart to which [I] **16 (tied)** my grandfather. He **17 (played)** the role of the horse and he **18 (carried)** me around the house, while my father **19 (read)** the newspaper. Ah! [Those] **20 (were)** the best years of my childhood.

Then [I] **21 (wanted)** to explore more and [I] **22 (went)** to the attic in which [there] **23 (were)** the Indian custom and a bow and arrows. When [I] **24 (visited)** my grandfather [I] **25 (put on)** the Indian custom and [I] **26 (played)** with my grandfather. He **27 (was)** my prisoner and I **28 (was)** an Indian armed with bow and arrows. [I] **29 (tied)** him to a column in the attic and [we] **30 (played)** for hours and hours until [it] **31 (got)** dark.

32 [It] (was) at that precise moment that [I] **33 (realized)** that the last time [I] **34 (played)** with him, [I] **35 (forgot)** to untie him! [I] **36 (went)** looking for him where [it] **37 (was)** that column. [I] **38 (climbed)** the stairs in a hurry, and then [I] **39 (found)** my grandfather. How horrible! There [it] **40 (was)** the skeleton of my grandfather tied to the column.

Appendix B. Tests used to determine lexical aspect and grounding categories

Tests of lexical aspect

These tests were based on questioning the verbal predicate of the clause/sentence according to the features of dynamicity and telicity.

Dynamicity (dynamic versus non-dynamic):

Does the predicate have a habitual interpretation in simple present tense?

If the answer is affirmative, the verb was classified as non-stative.

Telicity (entailment test):

If we stop in the middle of V-ing, have we done the act of V?

If the answer is affirmative, the verb is classified as atelic.

Tests of narrative grounding

The tests to determine grounding were based on the identification of the foregrounded elements of a sentence.

The foreground was defined by

1. chronological order: clauses that are part of the main plot line of the story and that are chronologically ordered (as opposed to flashbacks, simultaneous actions),

2. punctuality: clauses that are punctual (as opposed to habitual events), and
3. completeness: clauses that are completed (as opposed to ongoing events).

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