The Primacy of Morphology in the Acquisition of Tense and Aspect in L2 Spanish Narrative Structure

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1. Introduction

A late-acquired process for L2 Spanish learners whose native language does not possess a rich morphological verbal system is the linking of past verbal morphology with the lexical semantics of the verb phrase, including its arguments and accompanying adverbial expressions. Research has shown that in early stages, learners tend to mark past predicates with the preterit as a kind of default past marker, and only as proficiency develops do they become sensitive to the inherent lexical semantics of verbal predicates and select verbal morphology accordingly (Cadierno 2000; Salaberry 1999, 2000, 2002, 2005; Camps 2002; Lubbers Quesada 2006a; Montrul and Slabakova 2002, 2003; among others). However, this task can be rendered more confusing for learners if they are taught, implicitly or not, that the use of verbal morphology is basically a co-indexing mechanism of certain adverbials. For example, in (1)

> (1) *Mi papá me _____ (llevar) exactamente a las siete de la mañana*
> 'My dad _____ (to take) me exactly at seven in the morning'

learners may be taught that preterit (*llevó*) morphology is appropriate to mark one single, completed (perfective) action in the past when accompanied by an adverbial that expresses a specific position on a time line[1]. The fact is that both preterit and imperfect (*llevaba*) are appropriate in this context with an adverbial of position. The use of the imperfect would signal an undetermined number of completed actions in the past. For native speakers, it is the morphology that determines a perfective (bounded) or imperfective (unbounded) reading of the verbal event, not the adverbial in this case. Likewise, learners may be encouraged to recognize that imperfect morphology combines with adverbials of duration. For example, L2 learners of Spanish might not expect the use of the preterit in (2), with *todo el tiempo* 'all the time', an adverbial of duration.

> (2) *Anduve*-PRET *con él todo el tiempo*
> 'I was with him all the time'

For the native speaker, the preterit morphology here signals a bounded, completed event of an unspecified duration. This is not to say that there are no restrictions on possible combinations of adverbials, predicate types and perfective or imperfective morphology (see Dowty 1991 for detailed explanations of certain restrictions), but the use of verbal morphology is less restricted than the learner is led to believe in the foreign language classroom. Hwang and Schubert (1994) maintain that the

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[1] Some textbooks imply this with examples; others explicitly express that some words and phrases help to know when to use imperfect and preterit. Long et al. (2007) provide a list of adverbials to use with the preterit, including *ayer* ('yesterday') and *la semana pasada* ('last week'); and another list to be used with the imperfect, including *todos los días* ('every day') and *frecuentemente* ('frequently') (279).

meanings of adverbials are signaled from the lexical entries (of the verbs) and morphology takes care of the aspectual compatibility of adverbials with the VPs that they modify (12).

There is evidence that learners, even at advanced levels, continue to depend on the adverbial to help define the aspectual reading of the verbal event and select the aspectual morphology accordingly, whereas native speakers of Spanish interpret the aspectual reading of the adverbial according to verbal morphology (Baker and Quesada 2011). It is therefore the objective of this study to examine more closely how L2 learners of Spanish from three different levels of proficiency and native speakers combine different types of adverbials with both telic (accomplishments and achievements) and atelic (states and activities) verbs and present, preterit and imperfect verbal morphology in personal oral narratives. The research question that guides the study is: To what extent are L2 learners and native speakers of Spanish constrained by adverbial type and lexical class when producing perfective (preterit) and imperfect (present and imperfect) verbal morphology in narrative structure?

2. SLA Studies in the Acquisition of Tense and Aspect of Spanish L2

There is a wide body of research in Spanish second language acquisition that addresses the interaction between the inherent lexical semantics of verbal predicates and the type of morphology used to express both tense and aspect (Andersen 1986, 1991; Cadierno 2000; Salaberry 1999, 2000, 2002, 2005; Camps 2002; Lubbers Quesada 2006a; Montrul and Slabakova 2002, 2003; among others). These studies have in common their attempts to test the lexical aspect hypothesis (LAH) which proposes that learners select grammatical aspect according to the inherent lexical semantics of verbal predicates. Related studies have examined the interaction among lexical aspect, morphology and discourse principles, including foregrounding and backgrounding (López-Ortega 2000; Liskin-Gasparro 2000; Salaberry 2011). Still others have investigated the influence of lexical devices, most notably, adverbials, and verb morphology for expressing temporal relations (Lee et al. 1997; Baker and Quesada 2011; Baker 2009; Lubbers Quesada 2006b; Sagarra 2006; Sagarra and Dussias 2001). Among these studies, there is less consensus; some suggest that learners rely on chronological order and lexical devices to signal both tense and aspect in the early stages of acquisition, and that these devices diminish as verbal morphology develops, while others have found that the use of lexical devices increases alongside morphological development and is used to signal more complex temporal relations.

2.1. Studies based on the lexical aspect hypothesis

Verbal predicates (including the arguments and adjuncts associated with them) are classified according to whether or not they are dynamic, telic (possess an inherent end point) and punctual. Achievements possess all three of these semantic qualities (e.g. *cross the line*); whereas accomplishments are dynamic, telic but not punctual because they require a certain amount of duration to "accomplish" (e.g. *build a house*). On the other hand, activities are dynamic but neither telic nor punctual (e.g. *read*), and stative predicates lack all three of these semantic properties (e.g. *feel, be*). Studies based on the LAH have shown, to different degrees, that as proficiency develops, learners are increasingly sensitive to the inherent lexical semantics of verbs and there appears to be a tendency to mark achievements and accomplishments with preterit morphology and activities and stative verbs with imperfect morphology. One of the first studies to examine the influence of lexical aspect on the acquisition of tense and aspect in Spanish L2 was carried out by Andersen (1986, 1991). In his longitudinal study of two adolescent English speakers learning Puerto Rican Spanish in a naturalistic setting, he found that the acquisition of tense and aspect appeared to follow eight stages where the preterit appeared earlier with verbs of achievement and gradually spread to accomplishments and activities and finally to stative predicates. Imperfect morphology developed in the opposite direction, surfacing later and first with states, gradually spreading to activities, accomplishments and finally to verbs of achievement.

Much of the work of Salaberry (1999, 2000, 2002, and 2005) and studies by Cadierno (2000), Camps (2002) and Quesada (2006a) have sought to corroborate the proposals of the LAH with classroom L2 learners from different proficiency levels. In Salaberry's investigations, he has examined

the potential impact of the inherent lexical semantics in instructed L2 learners' selection of tense/aspect morphology. Upon analyzing the selection of preterit and imperfect among learners from several proficiency levels who had completed a variety of tasks, including oral narratives and written cloze and editing tasks, results of all of these studies showed that in the beginning stages of acquisition, inherent lexical aspect did not influence the use of past tense verbal morphology and that learners tended to use the preterit form as the default past tense marker for all lexical classes. Salaberry found that as learners' proficiency developed, the role of lexical semantics had an increasing influence on the selection of verbal morphology and imperfect morphology emerged first with stative verbs and gradually extended to atelic verbs of activity and telic events. In her study of advanced L2 learners of Spanish with Danish as their L1, Cadierno found stronger support for the influence of the LAH on learners' appropriate selections of preterit and imperfect in both written and oral tasks, although there was a great deal of learner variation among participants. She also found that participants tended to pair preterit more with achievement verbs and imperfect more with states, whereas with accomplishments and activities there was less categorical use. Camps analyzed the oral production of second semester learners who participated in a variety of oral narrative tasks and, like Salaberry, found limited influence of lexical aspect in the use of preterit and a more robust effect of inherent aspect in the selection of imperfect with verbs of state. He found a greater influence due to task type; learners used more preterit in relating a sequence of discrete actions and more imperfect for narrating the habitual past. In a study of three levels of learners studying Spanish abroad, Quesada also found a reliance on the preterit for past marking regardless of lexical class in the lower levels with the imperfect being used first with verbs of state and gradually extending to atelic activities and telic events. Quesada concluded that learners are sensitive to different semantic properties that encode lexical aspect at different stages; they first distinguish states from dynamic events and as proficiency improves, gradually incorporate the notions of telicity and punctuality.

2.2. The influence of lexical aspect and discourse principles

Other authors have suggested that in addition to lexical aspect, discourse principles of narrative grounding influence the selection of grammatical tense and aspect. López-Ortega (2000) analyzed the oral narratives of four naturalistic L2 Spanish learners who were Moroccan Arabic/French bilinguals. She considered a wider range of verbal morphology, including present tense, present perfect, pluperfect and progressive tenses. Although her participants tended to mark foregrounding with perfective past morphology and backgrounding with imperfective morphology, lexical aspect overrode this tendency; learners marked more achievements with perfective past and more stative verbs with imperfective morphology. A similar study examining the impact of lexical aspect, discourse constraints and task type was conducted by Liskin-Gasparro (2000) with advanced classroom learners of Spanish L2. The tasks included a retelling of a portion of a silent film, a personal narrative and a retrospective protocol session. The results revealed that task type and discourse grounding were strong predictors for the selection of verbal morphology; learners selected preterit more often for foregrounded events in the film narrative and backgrounding or descriptive information marked with the imperfect was more common in the personal narrative. The retrospective protocol revealed that these advanced learners strongly correlated stative verbs with the imperfect, as predicted by the LAH. Salaberry (2011) also examined the effects of both lexical aspect and contextual grounding on the selection of preterit and imperfect among classroom L2 learners of Spanish from four different levels of proficiency and native speakers from Mexico and Uruguay. In a written discourse-based task where participants were asked to complete a narrative of a popular cartoon selecting either preterit or imperfect, he found that grounding was more likely to distinguish native speakers from learners than lexical class. Corroborating López-Ortega's results, he found that learners relied more on lexical class than grounding, choosing the imperfect for states and the preterit for telic events, whereas the native speakers selected more imperfect for backgrounded events and preterit for foregrounded events regardless of lexical class. While the selections of native speakers according to grounding were categorical, those of the non-native speakers became gradually more categorical as their proficiency level increased. These studies bring to light the importance, and often-overlooked variable, of contextual factors in the interpretation (and selection) of aspectual marking.

2.3. The interaction of temporal morphology and lexical devices

Research in processing studies has not looked specifically at the influence of inherent aspect but has indicated that learners rely on lexical devices, mostly adverbials, to help them decode the tense and aspect of L2 input (Musumeci 1989; Lee et al. 1997). VanPatten (2004) has claimed that adult L2 learners rely mostly on lexical, rather than grammatical, cues in order to communicate in the L2. In general, it has been shown that learners comprehend better when verb morphology is supplemented with corresponding temporal adverbials. Sagarra and Dussias (2001) conducted an online processing task with intermediate Spanish L2 learners and found that they processed temporal grammatical forms more quickly when past temporal adverbs agreed in tense with preterit verbs than when the same adverbs were combined with present morphology. Nevertheless, Sagarra (2007) found that beginning learners took as long to comprehend preterit verbs that agreed with past temporal adverbs as they did with present verbs that contradicted the temporal adverbs. These studies suggest that in beginning stages, adverbials are the only indicators for tense and/or aspect, whereas for more advanced learners, adverbials combine with and enhance the processing of temporal morphology. Similar results were found by Quesada (2006b) who investigated the use of temporal and frequency adverbials in the oral personal narratives of beginning, intermediate and advanced L2 learners and native speakers of Spanish. She found that the lower proficiency learners used fewer adverbials and less past morphology but when adverbials were used, they substituted for morphology. More advanced learners used far more adverbials but the combination of past morphology and adverbials was used to signal more complex temporal relations. Furthermore, it was found that the most proficient learners used adverbials of frequency with verbs inflected for imperfect aspect and temporal adverbials with verbs inflected for preterit aspect while less proficient learners did not use adverbials in conjunction with either aspect. In an attempt to study this last finding more systematically, Baker (2009) and Baker and Quesada (2011) examined the effect of temporal adverbials in the selection of Spanish preterit and imperfect by intermediate and advanced L2 learners and native speakers of Spanish in an on-line cloze task. Including passages with and without adverbials, participants were asked to select either preterit or imperfect. Results indicated that temporal adverbials helped all groups select preterit, but that adverbials of duration or frequency prompted a much higher rate of imperfect responses among learners than among native speakers. The authors concluded that whereas for English speakers the adverbial determines the aspectual morphology to be used, for Spanish speakers the use of aspectual morphology determines the aspectual reading of the adverbial.

The present study seeks to further examine how adverbials determine, if they do, the selection of tense-aspect morphology and the interaction of lexical semantics in L2 learners' and native Spanish speakers narrative structure. The types of adverbials examined are based on Dietrich et al.'s (1995) classification and include temporal adverbials of position, which specify the position of a time span on the time axis in relation to some other time span (e.g. *ahora* 'now', *ayer a las 6:00* 'yesterday at 6:00'); adverbials of contrast, which serve to mark a particular contrast (e.g. *otra vez* 'again', *todavía* 'still', *ya* 'already, any more, no longer, yet, that's it'), adverbials of duration (e.g. *por muchos días* 'for many days', *toda la semana* 'all week') and time span (e.g. *en una hora* 'in an hour'), and adverbials of quantity or frequency (e.g. *dos veces* 'twice', *frecuentemente* 'frequently', *casi nunca* 'hardly ever'). In the following section, I review the restrictions of combinations of adverbials with different classes of verbs as applied to Spanish. These restrictions are based on Dowty (1991), and the aspectual shift that results from non-prototypical matchings outlined by Hwang and Schubert (1994).

3. Combinations of temporal adverbials with verb classes
3.1. Restrictions

Temporal adverbials of position (TAP) refer to a very specific time and generally combine with telic verbs and preterit verb morphology.

(3) *Llegué*-PRET *a casa ayer a las seis* 'I arrived at home yesterday at six'
(4) *Hace dos semanas vi*-PRET *a Jorge* 'Two weeks ago I saw George'

The combination of states with TAPs is odd as in (5), but some states can acquire a telic (or bounded) reading (see section 3.2.).

    (5) ?*Te amé*-PRET *ayer a las seis* '?I loved you yesterday at six'

Temporal adverbials of duration (TAD) may only modify atelic sentences, with either preterit or imperfect morphology as exemplified in (6) and (7); they do not combine with accomplishments (8) and achievements (9).

    (6) *Juan estuvo*-PRET/*estaba*-IMP *casado por solo dos años* 'John was married for only two years'
    (7) *Juan manejó*-PRET/*manejaba*-IMP *toda la noche* 'John drove/was driving all night'
    (8) **Juan corrió*-PRET *un kilómetro por una hora* '*John ran a kilometer for an hour'
    (9) **María se dio*-PRET *cuenta del problema toda la noche* '*Mary realized the problem all night'

TADs of time span may modify only accomplishment sentences in the preterit as in (10), not activities as in (11) and (12), or states as evidenced in (13).

    (10) *Belén leyó*-PRET *un libro en una hora* 'Belen read a book in an hour'
    (11) ?*Juan corrió*-PRET *en una hora* '?John ran in an hour'
    (12) **Juan leyó*-PRET *libros en una hora* '*John read books in an hour'
    (13) **Estuve*-PRET *contento en una hora* '*I was content in an hour'

Temporal adverbials of frequency or quantity (TAQ) combine with telic verbs with both preterit or imperfect morphology and signal "a sequence of subevents of specified types" (Hwang & Schubert 1994: 11). In (14) the motor broke down many times and in (15) the operator checked the oil level on repeated occasions every half hour.

    (14) *Frecuentemente se descompuso*-PRET /*descomponía*-IMP *el motor*
      'Frequently the motor broke/would break down'
    (15) *El operador checó*-PRET /*checaba*-IMP *el nivel de aceite cada media hora*
      'The operator checked/was checking the level of oil every half hour'
      (Hwang & Schubert, 11)

Finally, adverbials of contrast (TAC) serve to mark a particular contrast: *otra vez* 'again', *todavía* 'still', *ya* 'already', 'no longer', etc., *de repente* 'suddenly', and depending on the contrast, signal the beginning, repetition, or end of an event; they usually combine with achievements and preterit morphology as seen in (16-18), but also can combine with the imperfect to signal the repetition of telic events.

    (16) *De repente desapareció*-PRET 'Suddenly he disappeared'
    (17) *Este chavo empezó*-PRET *con ella otra vez* 'This guy started with her again'
    (18) *ya cambiaron*-PRET *las cosas* 'already (by then) things changed'

3.2. Temporal adverbials and aspectual class shift

    Aspectual class shift can occur with non-prototypical combinations of certain adverbials and aspectual classes. When combined with TAPs and TAQs in the preterit, states can become bounded events as in (19) and (20).

    (19) *Hace dos semanas estuviste*-PRET *contento* 'Two weeks ago you were content'
    (20) *Memo estuvo*-PRET *enfermo dos veces el año pasado* 'Bill was sick twice last year'

An unbounded (atelic) event can become a series of bounded events when combined with a TAQ as (21) shows.

(21) *Juan corrió*-PRET *media hora cada mañana por un mes*
    'John ran half an hour every morning for a month' (Hwang &Schubert, 12)

This shift is made even more evident with imperfective morphology as in (22) and (23).

(22) *A veces me hacía*-IMP *más caso a mí que a su novia*
    'Sometimes he would pay more attention to me than to his girlfriend'
(23) *Él venía*-IMP *cada vacaciones*
    'He would come every vacation'

Finally, a TAD when combined with telic verbs can signal the duration of the **result** of the telic event, not the duration of the event itself as exemplified by (24).

(24) *Juan salió*-PRET *de su oficina por quince minutos*
    'John left his office for fifteen minutes' (Hwang &Schubert, 12)

Or, as (25) shows, the TAD can express the repetition of a telic event.

(25) *María ganó*-PRET *la competencia por cuatro años*
    'Mary won the competition for four years' (Hwang &Schubert, 12)

Table 1 summarizes the restrictions of the different types of temporal adverbials with verb classes and signals the possibilities of aspectual shift with non-prototypical verb classes. The table also mentions the expected verb morphology with the different adverbial/verb combinations for Spanish.

Table 1. Restrictions of adverbial type with verb class and morphology/aspectual shift with non-prototypical verb class and morphology

Adverbial type	Verb class	Verb morphology	Non-prototypical verb	Verb morphology	Aspectual shift
TAP	telic	preterit	atelic	preterit	becomes a bounded telic event
TAD	atelic	preterit/ imperfect	telic	preterit	signals duration of result or repetition of telic event
TAD-time span	telic	preterit	NA		
TAQ	telic	preterit/ imperfect	atelic	preterit/imperfect	bounded event or series of bounded telic events
TAC	telic	preterit/ imperfect	NA		

We can thus hypothesize that native speakers will conform to the restrictions outlined above but will also make use of the possibilities for aspectual shift in their oral narratives. We want to ask to what extent L2 learners of Spanish abide by these restrictions and to what extent they allow for certain aspectual shifts in their narrative structure when combining adverbials with different classes of verbs and marking for preterit or imperfect morphology. In order to answer this question, I analyzed oral narratives of native Spanish speakers and three groups of L2 learners for their use of adverbial type, verb class and verbal morphology and compared this use among the four groups of participants.

4. Methodology
4.1. Participants

For the present study, 40 personal oral narratives produced by learners of Spanish from three proficiency levels and native speakers from Mexico were examined. All learners were enrolled in first and second-year Spanish and upper-level Spanish linguistics courses at a major U.S. university. Level 1 was comprised of beginning students in the third trimester. Eight of the ten had had two to three years of high school Spanish, but placement exams indicated a beginning level of Spanish. Level 2 consisted of intermediate students enrolled in the second trimester of the second year. All but one had had two to four years of Spanish in high school, and one had taken French for six years. The students in Level 3 were taken from upper-division Spanish linguistics courses; all had had two to four years of Spanish in high school and two had also studied French for four or six years. There were no participants who had studied abroad and no heritage speakers of Spanish. A subsequent error analysis was performed on the learners' narratives and participants were divided into three groups according to their use of appropriate past verbal morphology in obligatory contexts. A context for past tense was considered obligatory if it was clear from the context that the speaker was referring to an event prior to speech time. For example, *Esa noche Juan me besa*-PRES *y estaba*-IMP *muy feliz después* ('That night John kisses-PRES me and I was-IMP very happy after') indicates two obligatory past contexts, one with the inappropriate use of present tense and one with the appropriate use of past imperfect. The range of past morphology used in obligatory contexts for the beginner group was 30-69% with a median score of 54%; the range for the intermediate group was 70-85% with a median of 81%; and the advanced group had a range of 87-100% with a median score of 96%. The fourth group was comprised of 10 native-Spanish speakers enrolled in an undergraduate degree program in Modern Languages at a large public Mexican university.

4.2. Data collection and analysis

The data were taken from *The UAQ-UCD Project for the Study of Spanish as a Foreign/Second Language in Mexico and the U.S.: The Acquisition of Discourse Competence* (Lubbers Quesada and Blake 2003). The database is comprised of 240 narratives of 50 L2 classroom learners from five levels of proficiency enrolled in Spanish programs in U.S. universities and 10 Mexican native speakers (NSs). The narratives were produced carrying out four different tasks (three personal narratives with different topics and the retelling a portion of a silent film). The analysis of the present study is based on 40 personal narratives (30 L2 learners and 10 NSs) from the third task, a personal narrative in which each participant had been asked to describe the first time they fell in love, or the first time they felt special about someone. Before completing the task, learners had been given instructions in English and were provided with basic vocabulary in Spanish related to the topic; the NSs were provided with the same instructions in Spanish without vocabulary. For each of the 40 narratives, all past temporal contexts were identified that were not part of an adverbial clause. Finite verbs that formed part of the adverbial clause were analyzed as a type of adverbial. For example, in a sentence such as, *cuando regresamos*-PRET*, todo iba*-IMP *bien* ('when we returned, everything was going well'), the first clause was considered an adverbial modifying the second clause and therefore was not tabulated as a separate past temporal context. Subsequently, the types of temporal adverbials, including clauses and phrases, used in past contexts were identified as TAP, TAD, TAQ, and TAC (see section 3 for descriptions of adverbial types and examples). There were no instances of TAD-time span in the narratives under study and thus this type of adverbial will not be further discussed. Past clauses that were not modified by an adverbial were not considered for the present study. Finally, the verbal morphology for each past clause was tabulated and the lexical class for each verbal predicate (not including adverbials) was categorized as stative, activity or telic (accomplishment/achievement). The beginner and intermediate groups made use of present, preterit and imperfect morphology to mark past contexts; the advanced and NS groups produced these in addition to present perfect, pluperfect, past progressive and imperfect subjunctive (the latter verb form was used only by the NS group). The present study will report on the results of the use of present, preterit and imperfect. Following the analysis of the narratives, the distribution and frequencies were calculated for each group's use for adverbial type, verb class and

verbal morphology. Subsequently, in order to determine a baseline for differences among groups, chi-square tests were run on frequencies of verbal morphology and adverbials types. In the results sections for each group, due to the low number of some tokens, states and activities were combined to form one class of atelic verbs, accomplishments and achievements were combined to form a class of telic verbs, and present and imperfect were combined to form one category of imperfective morphology. Examples will make clear the distinction between states and activities and achievements and accomplishments.

5. Results and discussion
5.1. General results

Table 2 presents a summary of the distribution of the use of verbal morphology for past temporal clauses that were modified by a temporal adverbial. For group 1, sixty-two temporal adverbials were produced; group 2 used 72; group 3 generated 132; and analysis of group 4 yielded 315 instances of temporal adverbials. Of note is the greater use of preterit among all three learner groups (between 63 and 69%) compared to the use by the NSs (only 40%); NSs exhibit a greater use of imperfect for this type of personal narrative, a finding similar to Salaberry (2011). These general findings corroborate previous studies that have shown learners rely more on preterit as a default past marker in the early stages of acquisition (Salaberry 1999, 2000, 2002, 2005; Camps 2002; Quesada 2006). The advanced group produces slightly fewer tokens of preterit but the difference is not significant. Not surprisingly, as proficiency develops each group produces significantly more instances of past temporal contexts. There is no significant difference among learner groups; however, between all learner groups and the NS group there was a significant difference in the use of both preterit and imperfect.

Table 2. Summary of distribution of verb morphology

Verb Morphology	Beginners	Intermediate	Advanced	NS
Present	11.29	5.56	12.88	0
Preterit	69.35	69.44	62.88	40.32
Imperfect	19.35	25.00	24.24	59.68
Total	62	72	132	315

df=3, X^2=55.93, p=0.003

The following table shows the distribution of the four types of temporal adverbials. There are no statistically significant differences among all groups for the use of TAP or TAC and among the three learner groups for TAD and TAQ; chi-square tests reveal significant differences only between all learner groups and the NS group for TAD and TAQ. In fact, the beginners produced two TACs; the intermediate and advanced had only five and six instances respectively. This finding is in accord with Noyau (2002) who claims that, due to their conceptually more complex nature, TACs appear later on in the production of adult learners (108). The following sections will discuss the distribution of verbal morphology and verb type for each type of temporal adverbial separately.

Table 3. Summary of distribution of temporal adverbials

Adverbial Type	Beginners	Intermediate	Advanced	NS
TAP (position)	45.16	31.95	42.42	35.99
TAD (duration)	41.94	48.61	42.42	28.03
TAQ (quantity)	9.68	12.50	10.60	15.61
TAC (contrast)	3.23	6.94	4.55	20.38
Total	62	72	132	315

df=5, X^2=26.9553, p=0.001

5.2. Temporal Adverbials of Position (TAP)

The restrictions for adverbial type, verb class and morphology would indicate that TAPs appear more often with telic verbs and preterit morphology and this prediction is partially borne out for the beginning and intermediate groups with approximately 36% of TAPs combining with preterit and telic predicates for the beginners and about 43% for the intermediates (see Figure 1); beginners also use TAPs to the same degree (36%) with atelic predicates in the preterit. Both the advanced and NS groups prefer to combine this type of adverbial with atelic verbs in the preterit with approximately 40% for both groups. The pattern of use that emerges for all three learner groups is a preference for combining TAPs with preterit morphology regardless of verb class; however, all four groups, also combine this type of adverbial to a lesser extent with atelic verbs in the imperfect and tend to avoid combinations with telic verbs in the imperfect.

Figure 1. Distribution of morphology and verb class with TAPs
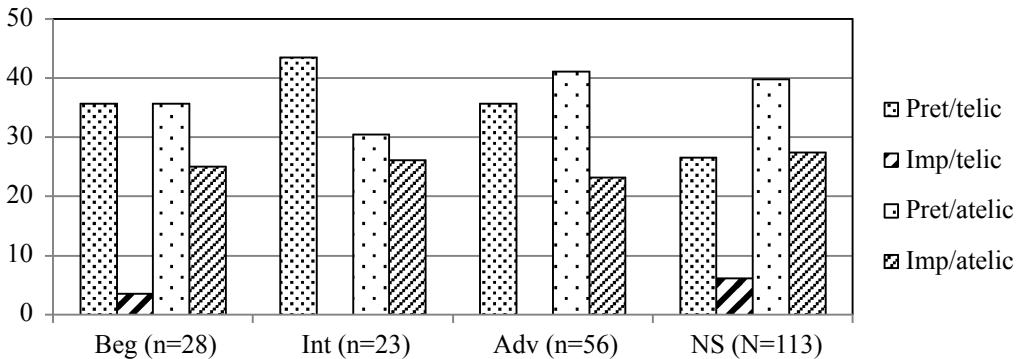
The use of TAPs with telic preterit predicates is prototypical for all groups. Examples (26-27) for two learner groups demonstrate this (BG indicates an example from the narratives of the beginner group, IN from the intermediate, AV from the advanced, and NS from the native speaker groups).

(26) *el próximo día preguntó*-PRET *Emily si ella quiere salir conmigo* (IN)
     'the next day he asked Emily if she wants to go out with me'
(27) *un lunes él me llamó*-PRET 'one Monday he called me' (AV)

The combination of this type of adverbial with atelic predicates (states and activities) in the preterit could signal an aspectual shift, from an unbounded event to a bounded telic event, and the advanced and NS groups showed evidence of this possible shift (28-31).

(28) *esta vez fue*-PRET *algo más fuerte* 'this time it was something stronger' (AV)
(29) *ella, después de eso, quiso*-PRET *reunir y yo no* (AV)
     'she, after that, wanted to get together and I didn't'
(30) *Cuando nos enamoramos, ella sintió*-PRET *algo muy extraño* (NS)
     'When we fell in love, she felt something very strange'
(31) *y mis amigos me llevaron*-PRET *a la hora indicada* (NS)
     'and my friends took me at the indicated time'

However, among the beginner and intermediate groups, this combination does not appear to result in any acceptable shift as (32-34) demonstrate.

(32) *Cuando conozco sus padres, estuve*-PRET *muy… ¿cómo se dice '*scared*'?* (BG)
     'When I meet her parents, I was very…how do you say 'scared'?'
(33) *Dos años en el pasado, en escuela secundaria, tuvimos*-PRET *muchos clases* (BG)
     'Two years in the past, in secondary school, we had many clases'

(34) *luego fuimos*-PRET *solamente amigos* 'later we were just friends' (IN)

The use of imperfect with atelic verbs also signals an aspectual shift when combined with TAPs, expressing a series or repetition of events at frequent intervals as in (35) and (36); only the NSs in this study produced acceptable examples of this shift.

(35) *mi papá me llevaba*-IMP *exactamente a la hora de entrada* (NS)
    'my dad took/would take me exactly at the entrance time'
(36) *Cuando se enojaron, no podíamos*-IMP *salir* (NS)
    'When they got mad, we couldn't go out'

This combination among all groups of learners produced sentences that did not result in native-like aspectual shift as (37-39) show.

 (37) *cuando rompimos, era*-IMP *más difícil para él que para mí* (IN)
    'when we broke (up), it was more difficult for him than for me'
(38) *Después de eso, no hablaba*-IMP *con ella para dos o tres semanas más* (IN)
    'After that, I didn't/wouldn't speak with her for two or three more weeks'
(39) *salimos al baile y yo me divertí*-PRET *…y entonces, era*-IMP *más fácil decir 'adiós'* (AV)
    'we left for the dance and I had fun…and then, it was easier to say 'good-bye'

Finally, there was one instance in the beginning group and seven among the NSs of TAPS with the non-prototypical combination of telic predicates in the imperfect; the intermediate and advanced groups avoided this combination. Only the NSs produced sentences that resulted in acceptable aspectual shift to an implied repetition or beginning of the telic event, perhaps every day (or some other frequently occurring interval). The morphology makes this clear even in the absence of a frequency adverb in (40-41).

(40) *ponía*-IMP *un despertador diez minutos antes de la hora* (NS)
    'she put/would put the alarm ten minutes before the hour'
(41) *desde ese entonces empezaba*-IMP *a tomar* (NS)
    'since then, he started/was starting to drink'

All four groups combine TAPs with telic predicates in the preterit in prototypical fashion; in addition all groups combine them with atelic predicates in the preterit, but only the advanced and NS groups' production results in acceptable aspectual shifts. The four groups also combine this type of adverbial with atelic predicates in the imperfect but only the NS's use result in an aspectual shift from an unbounded event to a series or repetition of events. Finally, only the NS group combines TAPs with telic predicates in the imperfect with the expected aspectual shift. Learners clearly associate TAPs with preterit regardless of verb class; whereas for the NSs this type of adverbial is not exclusively combined with telic preterit verbs and the non-prototypical combinations result in acceptable aspectual shifts.

5.3. Temporal Adverbials of Duration (TAD)

The expected combination for TADs is with atelic verbs either in the preterit or imperfect and it appears that all learner groups and NSs adhere to this restriction in most instances (Figure 2). For the beginners, 73% of TADs combine with atelic verbs (38% in the preterit and 35% in the imperfect); for the intermediate group a similar pattern emerges at 71% (37% with preterit and 34% with imperfect); the advanced group combined TADs with atelic verbs 93% of the time (48% with preterit and 45% with imperfect); and for the NSs 84% of TADs were combined with atelic predicates (50% with preterit and 34% with imperfect).

Figure 2. Distribution of morphology and verb class with TAD
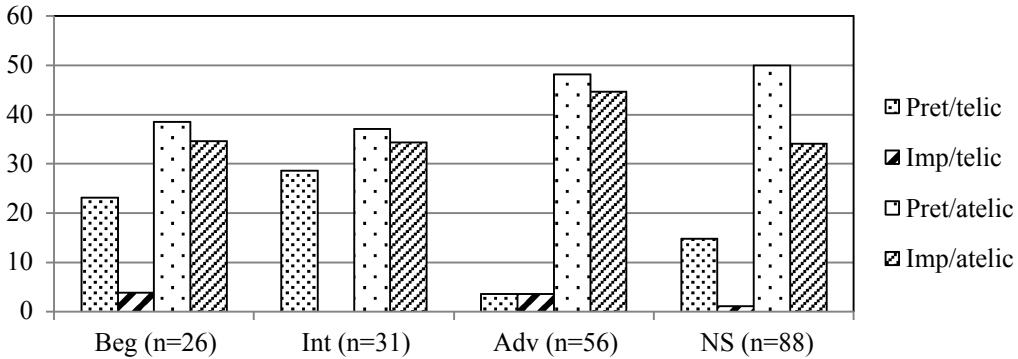
For all groups the combination with atelic preterit verbs is prototypical as (42-44) indicate.

(42) *salí*-PRET *con él por dos años* 'I dated him for two years' (IN)
(43) *vivimos*-PRET *juntos para un año y media* 'we lived together for a year and a half' (AV)
(44) *anduve*-PRET *con él todo el tiempo* 'I was with him all the time' (NS)

For both advanced and NS groups, the combination with imperfect is also prototypical in (45) and (46).

(45) *él jugaba*-IMP *en el primer equipo desde su primer año en la escuela* (AV)
  'he played/was playing on the first team since his first year in school'
(46) *Andábamos*-IMP *juntos todo el tiempo* 'We were/would be together all the time' (NS)

These examples demonstrate that it is not the aspectual meaning of the adverbial that conditions the use of preterit or imperfect among advanced learners and NSs, but rather is the morphology that works to interpret the aspectual reading of the adverbial. *Todo el tiempo*, for example, becomes a bounded span of time in (44) and an unbounded one in (46). The combination for beginners and the intermediate group did not always result in native-like production in (47) and (48) where the preterit would be expected with a specific duration of time.

(47) *me gustó mucho y era*-IMP *mi novio por dos años* (BG)
  'I liked him a lot and he was my boyfriend for two years'
(48) *éramos*-IMP *novios pero solamente por unas semanas* (IN)
  'we were boyfriend and girlfriend but only for a few weeks'

This type of production may be the result of the learners' association of stative verbs with the imperfect or be the product of textbooks and language instructors teaching that TADs normally combine with imperfect morphology. There were fewer instances among all groups of combinations of TADs with telic preterit predicates, but the few instances resulted in the expected aspectual shift for NSs. In (49), the non-prototypical use of a telic verb indicates the duration of the result of the telic event, whereas in (50), the duration expressed in the adverbial is the cause of the telic event, an aspectual shift not contemplated by Hwang & Shubert.

 (49) *terminó*-PRET *él quedando en la tarde todo el semestre* (NS)
  'he ended up going in the afternoon all semester'
(50) *al transcurso del tiempo, su manera de comportarse me enamoró*-PRET *tanto* (NS)
  'with time, his manner of conducting himself made me fall in love so much'

Among the learner groups, aspectual shift does not occur in contexts where the imperfect would be the expected verbal morphology as in (51) and (52).

(51) *todo el mes de enero él me dijo*-PRET*, "Oh, me gusta mucho"* (BG)
   'all the month of January he told me, "Oh, I like you a lot"'
(52) *por muchos años yo conocí*-PRET *a Miguel* (IN)
   'for many years I met/knew Miguel'

For the most part, all groups avoided combining this type of adverbial with telic imperfect predicates. Both learner and NS groups exhibit a pattern of use with TADs which conforms to the restrictions outlined by Dowty (1991) and Hwang and Schubert (1994), limiting their combinations mostly to atelic verbs. However, NSs are also adept at matching up this type of adverbial with telic verbs in the preterit, with an acceptable aspectual shift, whereas the learner groups have not yet learned the restrictions and possibilities for this shift.

5.4. Temporal Adverbials of Quantity (TAQ)

Adverbs of quantity prototypically combine with telic predicates in either the preterit or imperfect; aspectual shift occurs when they are matched up with atelic predicates in the preterit or imperfect resulting in a bounded event or a series or repetition of bounded events. Between the beginner and intermediate groups, there were only six and nine instances respectively, which render conclusions regarding patterns of use tenuous (Figure 3). Both groups preferred to combine this type of adverbial with atelic predicates in the preterit although not with the expected aspectual shift seen with the other two groups. Thus, discussion in this section will center on the advanced and NS groups.

Figure 3. Distribution of morphology and verb class with TAQ
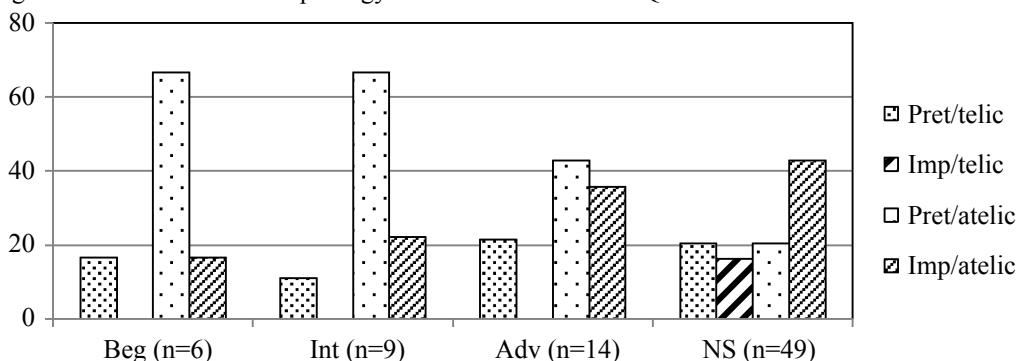
Among the advanced learners, there are 14 instances of TAQS which, contrary to the prediction, combine more with non-prototypical atelic verbs in both preterit and imperfect although often resulting in acceptable aspectual shifts. There were, however, three occasions of TAQs combining with telic preterit verbs in prototypical fashion as in (53).

(53) *en un día, yo encontré*-PRET *a él dos veces* 'in one day, I bumped into him twice' (AV)

Non-prototypical combinations with atelic verbs in the preterit and imperfect for the advanced group do result mostly in expected aspectual shifts.

(54) *hablamos*-PRET *muchas veces en el laboratorio de química* (AV)
   'we spoke many times in chemistry lab'
(55) *nos veíamos*-IMP *muchas veces en varias fiestas* (AV)
   'we saw/would see each other many times in various parties'

Whether marked in preterit or imperfect, the use of atelic verbs in (54) and (55) with TAQs results in the unbounded events becoming a series of bounded events. The advanced group shows a pattern of use less confined to verb class than the lower proficiency groups; when non-prototypical combinations

are produced, these result in acceptable aspectual shift. The NS group produced a total of 49 TAQs; however only combining in prototypical fashion with preterit or imperfect telic verbs in 37% of the occasions. Examples (56) and (57) reveal that the TAQ signals the repeated occasions of the event and the verbal morphology expresses the bounded or unbounded nature of the repeated events

    (56) *yo nunca contesté*-PRET *sus saludos* 'I never answered his greetings' (NS)
    (57) *siempre nos encontrábamos*-IMP *en su estudio* (NS)
       'we always bumped/would bump into each other in his study'

Non-prototypical combinations of TAQs with atelic verbs in the preterit or imperfect are most frequent, occurring more than 63% of the time among NSs. Examples (58) and (59) illustrate clearly that for NSs, it is the verbal morphology that does the work of interpreting the aspectual reading of the adverbial.

    (58) *Lo vi*-PRET *todos los días* 'I saw him every day' (NS)
    (59) *Nos veíamos*-IMP *todos los días* 'We saw/would see each other every day' (NS)

With TAQs, for both the advanced and NS groups, there does not seem to be a clear preference for verb class or verbal morphology, contrary to the predictions. Nonetheless, the non-prototypical combinations with atelic verbs do result in acceptable aspectual shifts.

5.5. *Temporal Adverbials of Contrast (TAC)*

Temporal adverbials of contrast serve to mark a particular contrast and depending on that contrast, can signal the beginning, repetition, or end of an event. They prototypically combine with telic predicates (most often with achievements) and preterit morphology, but also can combine with the imperfect to signal the repetition of telic events. They do not generally combine with atelic verbs, but as will be seen, the NSs of this study do produce such combinations. The participants in all three learner groups produced very few TACs in sharp contrast to the NS group; thus, detecting patterns of use for all three groups are again tenuous (Figure 4). This section will discuss only the NSs' use and distribution and all examples are from the NSs' narratives.

Figure 4. Distribution of morphology and verb class with TAC (contrast)
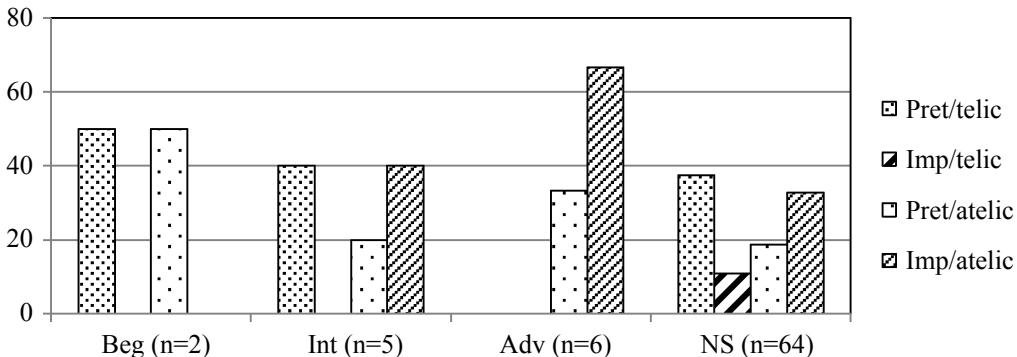
When expressing the beginning or end of an event, TACs combine with preterit telic predicates as illustrated in (60) and (62); when conveying the repetition of an event, they occur in the imperfect as in (61) and (63). It is the morphology once again which signals the aspectual reading, not the adverbial.

    (60) *este chavo empezó*-PRET *con ella otra vez* 'this guy started going out with her again'
    (61) *otra vez volvía*-IMP *con él* 'again she got/would get back together with him'
    (62) *ella llegó*-PRET *tarde* 'she arrived late'
    (63) *él llegaba*-IMP *tarde* 'he arrived/would arrive late'

These NSs also combine TACs in a non-prototypical fashion, not predicted by Hwang and Schubert, with atelic verbs in the preterit and imperfect.

(64) *todavía lo vi*-PRET *los siguientes años en la primaria*
     'I still saw him the following years in primary school'
(65) *de repente yo también sentía*-IMP *que le gustaba*
     'all of a sudden I also felt/was feeling like he liked me'

In (64), with the choice of the preterit morphology, the speaker chooses to emphasize the bounded nature of the event which occurred in primary school, a long time ago; in (65), on the other hand, the use of the imperfect with *de repente* ('all of a sudden') expresses the beginning of the change of state which had a certain duration. These non-prototypical combinations once again reveal that NSs are not constrained by the prototypical combinations of adverbials with verb class or morphology. They freely select non-prototypical matchings in order to convey their desired perspective on the event and when the boundedness of the adverbials doesn't match that of the inherent or grammatical aspect of the verb, aspectual shifts occur.

6. Conclusions

Several patterns emerge with the learner groups and contrast sharply with the NSs' use of adverbials with different verb classes and morphology. For learners, the type of adverbial used appears to restrict the verb class and morphology in different ways; they select preterit more often with TAPS regardless of verb class, and select atelic verbs with TADs regardless of verb morphology. However, non-prototypical aspectual shift does not occur in the examples of the lower proficiency learners in Groups 1 and 2. Native-like aspectual shift only occurs in the production of the more advanced learners of Group 3. We also observe that the learner groups do not over-generalize TAPs with telic verbs in the imperfect. Finally, learners do not make use of as wide a range of complex adverbials, including FAQs and FACs which signal recurrent events or complex contrasting events respectively in narrative structure. Native speakers use a wider range of adverbial types and combine verbal class with morphology in a prototypical fashion only for TADs (atelic verbs with either preterit or imperfect). Categorical patterns of use with the other types of adverbials are not observed with the NSs; they combine TAPs, TAQs and TACs with both telic and atelic sentences in both preterit and imperfect. In fact, some rather non-prototypical matchings occur and yet in each case, we can observe that an acceptable aspectual shift occurs. These results indicate that English-speaking learners are confined by the inherent lexical aspect of both the adverbial and the verb, whereas NSs rely on the morphology in expressing aspectual distinctions regardless of verbal semantics or adverbial type.

English speakers in their native language are accustomed to relying on lexical cues and attending to the aspectual reading of temporal adverbials and therefore, select verbal morphology accordingly. Although this strategy may work for the prototypical matchings of adverbial, verb and morphology in their Spanish L2, learners need to understand that the use of verbal morphology is not just a co-indexing mechanism of certain adverbials, but rather that morphology is a primary means for marking aspectual distinctions in Spanish. Indeed, Hwang and Schubert maintain that the meanings of adverbials are signaled from the lexical entries and morphology takes care of the aspectual compatibility of adverbials with the VPs they modify (12). Learners, in order to be more native-like speakers, need to understand the importance of morphology for expressing aspectual points of view in narrative structure in Spanish.

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