

More evidence concerning the Aspect Hypothesis: The acquisition of English progressive aspect by Catalan-Spanish instructed learners¹

CARMEN MUÑOZ AND ROGER GILABERT

Abstract

A robust finding from studies investigating the Aspect Hypothesis is that learners at the early stages of acquisition show a strong preference for using the progressive aspect as associated with activity verbs. As they advance in their acquisition of the second or foreign language, learners move from this prototypical association to associations traditionally considered to be more peripheral (e.g., -ing with accomplishments or achievements). Within this framework, the goal of this paper is to provide further evidence from groups of learners with different proficiency levels with regard to the acquisition of progressive aspect by tutored learners of English who are bilingual Catalan-Spanish. This is done by eliciting data by means of two different task types and by looking at both tokens and types. Our results are consistent with previous research according to which -ing morphology is closely associated with durative lexical aspect, although not necessarily with activity predicates. The study also shows that the type of task has an influence on the frequency and the distribution of learners' progressive forms.

1. Introduction

In the last two decades, tense and aspect have been heavily researched in both L1 and L2 acquisition. Many researchers have found that when second or foreign language learners try to communicate certain events, especially at early stages, they tend to do so by associating certain verbal morphemes with certain verbs in quite predictable a way. For example in the case of English, re-

1. We acknowledge the support of grant HUM2007-64302 of the MICINN and of grant 2009SGR137 of the AGAUR. We would also like to express our thanks for the help of Cristina Aliaga, Júlia Barón and Anna Marsol, as well as the very helpful comments of Laura Collins and the reviewers.

searchers have shown how learners across a variety of languages first map the *-ed* verbal inflection to actions which are punctual and with a clear endpoint (e.g., *started*, *stopped*), while they attach *-ing* to verbs which express events that have a continuity over time and that have no clear endpoint (e.g., *playing*, *running*). Many researchers have claimed that the reason certain grammatical morphemes are attached to some specific verbs and not others is highly dependent on the inherent semantic features of verbs. This general claim, which has been confirmed by acquisition studies on both Indo-European and non-Indo-European languages, has been postulated as the Aspect Hypothesis (AH). An array of empirical studies with children and adults, in both ESL and EFL contexts, and which have drawn on various data-collection tasks have, with a few exceptions, provided support for the AH. Many of these studies, however, have shown no clear agreement as to which theoretical explanations should be given to the predictable patterns of acquisition of tense and aspect. Hence, reasons such as the distribution of input (Ayoun and Salaberry 2008; Rhode 1996; Robison 1995; Andersen and Shirai 1994) to which learners are exposed, the influence of the teaching environment (Bardovi-Harlig 1992), L1 influence (Collins 2002, 2004; Sugaya and Shirai 2007) or alternative universal mechanisms (Slabakova 1999; Gavrusseva 2002; and Haznedar 2007 for a counterargument) among others, have been advanced in order to provide an explanation for certain robust patterns of the acquisition of tense and aspect morphology. Within the framework of the AH, the goal of this paper is to provide further evidence from cross-sectional data with regard to the acquisition of progressive aspect by learners of English who are bilingual Catalan-Spanish, a language constellation that has not previously been studied in this domain.

2. The Aspect Hypothesis

The AH, developed by Andersen and Shirai (1994, 1996), Shirai and Andersen (1995), Bardovi-Harlig (1992, 2000), Robison (1995), and Shirai, (1991), draws a distinction between grammatical aspect, which is marked by linguistic devices such as the use of auxiliary or verb morphology, and inherent lexical aspect, which refers to the 'internal' temporal characteristics of verbs and, more specifically, to the temporal conditions of the situation that the verb designates (Sugaya and Shirai 2007: 3). One of the most robust and consistent findings within the AH is that students at early stages of acquisition show a strong preference for using past tense and perfective aspect morphology with punctual (i.e., with no continuity over time) and telic (i.e., with an inherent endpoint) verbs, while they use the progressive aspect as associated with dynamic and atelic activity verbs. These have been defined as the prototypical uses of morphology, as opposed to its peripheral uses. As they advance in their

acquisition of the second or foreign language, learners move from prototypical associations (e.g., *-ing* and activity verbs) to more peripheral associations (e.g., *-ing* with accomplishments or achievements).

In this study we adopt Vendler's (1967) four aspectual categories which stand as the combination of three semantic features: dynamicity of an action, its punctuality or duration, and its telicity or atelicity, that is, the existence of an inherent endpoint or the lack of it. These categories can be summarized as:

1. STA: state verbs describe a non-dynamic situation which is sustained over time unless some other outside situation alters it (e.g. *know, want*) [+static, +durative, –telic].
2. ACT: activity verbs refer to a dynamic situation which takes place over time characterized by the fact that it has no inherent endpoint (e.g., *play, run*) [–static, +durative, –telic].
3. ACC: accomplishment verbs make reference to a situation which is dynamic and sustained over time but which includes a necessary endpoint (e.g., *have breakfast, run a mile*) [–static, +durative, +telic].
4. ACH: achievement verbs which designate a dynamic but punctual situation with an inherent end point (e.g., *die, get up*). [–static, –durative, +telic].

The general and by now widely accepted conclusions drawn from empirical evidence in the process of acquisition of an L2 are that: (1) the perfective/past markings are first used with achievement, accomplishment and later on with activity and state verbs; (2) if a language establishes the perfective-imperfective distinction by resorting to morphology, the perfective past is acquired before the imperfective, and imperfective past markings go from state and activity verbs to accomplishments and achievements; (3) if a language marks the progressive aspect morphologically, activity verbs will be marked first and only in later sequences will progressive marking be attached to accomplishments and achievements; (4) in the case of L1 acquisition, progressive marking is not normally wrongly overextended to stative verbs, which is not the case with the L2 (see Li & Shirai 2000). This paper addresses the third generalization as applied to the acquisition of English by Catalan-Spanish-speakers in a foreign language instructional context.

The choice of the progressive aspect in this study is motivated by a series of sources of evidence. First of all, the *-ing* suffix emerges earlier than the *-ed* suffix in the learners' interlanguage. In fact, it occupies the first position in the various ranks proposed by researchers (Krashen 1977; Pica 1983; see Wagner-Gough 1978 for an early review²), including those emerging from for-

2. Wagner-Gough (1978: 161) outline four characteristics of the progressive which are largely responsible for its early appearance: (1) the *-ing* morpheme is easily recognizable, that is, perceptually salient (Slobin 1973); (2) it is a frequently occurring form in a child's speech environment, both in parents' speech (Brown 1973) and teachers' speech (Legun 1969 in

mal learning settings, in which the distortions and the scarcity of the input may change the order of the emergence of other morphemes (Muñoz 2006). A recent study of teacher talk to L2 learners (Collins et al. 2009) has identified three factors that appear to make the progressive more available and accessible in the input than other forms such as the simple past: type frequency, semantic scope and perceptual salience. Secondly, not many researchers look at initial stages of L2 learning and there is a general gap in the SLA literature that adds interest to studies that include data from beginner learners. The study of the acquisition of the progressive aspect needs to include these initial stages. Thirdly, as will be seen in the literature review below, few studies have used different oral elicitation task types. In addition, the present study looks at the acquisition of the progressive in instructed foreign language learners, and as Ayoun and Salaberri (2008) point out, few studies on the progressive aspect (Robison 1990, 1995) have been carried out in a foreign language context.

2.1. *Evidence about the acquisition of the progressive in English*

The review that follows revolves around four general findings from studies on the acquisition of the English tense and aspect system, and more specifically of progressive morphology: (1) the correlation between morphology and lexical aspect; (2) the effects across contexts; (3) the association of progressive morphology with durativity; and (4) the prototypical association of progressive with activities. The review unveils issues that have not been specifically addressed in previous research, such as the potential task effects, the choice of token and type calculations, or the issue of L2 speakers' proficiency, which are still in need of further investigation.

Firstly, the most encompassing finding concerns the correlation observed between grammatical aspectual morphology and lexical aspect. Most studies in the area of the AH (Robison 1990; Bardovi-Harlig 1992; Huang 1993, 1999); Robison 1995; Shirai & Andersen 1995; Bardovi-Harlig & Reynolds 1995; Bardovi-Harlig & Bergström 1996; Rhode 1996, 2002; Bardovi-Harlig 1998; Lee 2001; Housen 1995, 2002; Collins 2002, 2004; Gravuseva 2002; Clachar 2004; Ayoun & Salaberri 2008; Rhode 2009) have shown that verbal aspectual morphology is strongly associated with lexical aspect. By way of example, Robison (1990) carried out a study with 1 Spanish speaker learning English in the US. In a chi-square design in which he used an interview to elicit speech from his subject, 6 different raters identified and rated 553 tokens organized into 171 predicate types by applying a number of operational tests. He concluded that

Wagner-Gough 1978); (3) it is phonologically stable; and (4) morphophonologically, it does not affect the base verb form to which it is attached.

verbal morphology is associated with lexical aspect at least at certain stages of interlanguage acquisition, even if acknowledging the influence of L1, L2 and individual differences. In a later study, 26 Puerto Rican college students were grouped into 4 proficiency levels by means of their written compositions. Robison (1995) used an oral interview as an instrument for data collection, and he hypothesized that *-ing* morphology would strongly correlate with activity verbs especially at low to intermediate levels, with a weaker dependence of lexical aspect and morphology at higher levels. Robison concluded that his results again displayed a strong link between morphological marking and aspectual category, with *-ing* being attached to activity verbs and almost never to state verbs. His hypothesis that at higher levels the correlation of *-ing* morphology and lexical categories would weaken was disconfirmed and the findings pointed to a reinforcement of the link. A third example is the study by Bardovi-Harlig and Reynolds (1995), which is further described below, in which the results also confirmed how the use of specific types of aspectual morphology go hand in hand with specific types of lexical aspectual classes.

Secondly, this association seems to hold regardless of the context (i.e., instructed or uninstructed ESL/EFL or age). A series of studies have reported similar findings on the acquisition of the English tense and aspect system by children (Rhode 1996; Gavrusseva 2002) uninstructed adult learners in an ESL context (Robison 1990; Bardovi-Harlig and Bergström 1996), and instructed EFL and ESL learners (Bardovi-Harlig 1992; Robison 1995; Bardovi-Harlig and Reynolds 1995; Housen 2002; Collins 2002, 2004; Ayoun and Salaberry 2008).

Thirdly, as for the *-ing* morphology in particular, research has consistently found that in the process of acquisition of English as an L2, progressive morphology is more clearly associated with the durative/punctual distinction and much less with the static/dynamic distinction (Robison 1990:327). Bardovi-Harlig (1992) conducted a cross-sectional study which tested 135 instructed adult ESL learners of English at six different levels of proficiency. A composition, a cloze test and a multiple choice questionnaire were used to elicit the data. The results, which looked only at tokens, displayed an increase in formal accuracy and appropriate use of progressive morphology as learners become more proficient. Bardovi-Harlig found a strong association between progressive morphology and durative verbs. As further described below, in a later study Bardovi-Harlig and Bergström (1996: 320) concluded that “learners initially respond to the durativity of activities in their use of progressive forms by marking lexical aspect redundantly with morphological aspect”.

Fourth, a number of studies have reported that, as observed in L1 acquisition (e.g., Shirai and Andersen 1995), a prototypical association exists between activity verbs and the progressive, which is then extended to accomplishments and achievements. Bardovi-Harlig and Reynolds (1995) carried out a cross-

sectional study with 182 adult learners of English organized into six levels of proficiency. They looked at 62 items in a cloze task for each subject and they found a strong tendency to attach *-ing* morphology to activity verbs with only negligible use of the progressive with state verbs as is the case in the target language. Bardovi-Harlig and Bergström (1996) compared the acquisition of tense and aspect by instructed ESL learners to that of instructed learners of French as a foreign language. They used written narratives following the viewing of a film scene to elicit data. Their results, which were calculated on the basis of tokens but not types, showed that the base form is the default form for activities, which are later associated with progressive forms (0-progressive, present progressive, and past progressive). However, the association was stronger at level 3 than at previous levels, which may be seen as a deviation from the AH (nor was the spread of morphological marking from lower level to higher level observed in a later study by Bardovi-Harlig (1998) that used written and oral film-retell narratives. They also concluded that the primacy of aspect prevails in both their English and French learners, and that in both instructed and uninstructed contexts there is early use of the progressive with activities. One exception of *-ing* also being associated with achievements at early stages was found by Rhode (1996). In a cross-sectional study with two German children learning English without formal instruction, Rhode used naturalistic data from a series of recordings of spontaneous speech over a period of six months. Contrary to previous findings, Rhode showed *-ing* inflection to be not only associated with activity verbs but, in a relatively high proportion, also with achievement verbs. In a later study by Collins with Francophone learners of English (2002) coming from the first three levels of a five-level intensive English program, learners performed a cloze task and a written retelling task. Collins reported again on the suppliance of progressive with activities. In a study comparing Japanese ESL and Francophone FSL learners of English from intact groups, which used 82 items in a cloze task, Collins (2004) predicted that this association regarding the progressive marker would be present in Japanese and absent in French, but no significant differences were found in the use of progressive with activities. The detailed case study of a tutored learner who was learning English in a school immersion context presented by Housen (2002) shows overgeneralization of *-ing* marking to state verbs. Moreover *-ing* is observed to spread simultaneously to achievements and states. At later recording times the extension of *-ing* to state verbs is reduced and reaches a proportion that is similar to that observed in NS data (see Housen 2002: 181f.). Last, Clachar (2004) used film re-tellings with Creole English speakers narrating in standard English. Learners were grouped into 4 proficiency levels by means of subjective ratings of their written narratives. Clachar found that the predicted association of *-ing* with activities was stronger as learners became more proficient.

Finally, in regard to explanations provided for such a phenomenon, one of the most recurrent accounts is the distribution of input. This is a consistent finding from L1 acquisition. For example, Shirai and Andersen (1995) found that caretakers tend to use the progressive with activities (53–61 %), and not to use the *-ing* inflection with state verbs, which, in their view, gives support to the Distributional Bias Hypothesis. In L2 acquisition, Robison (1995: 363) also explained the reinforcement in the association of activities with *-ing* by stating that “learners pick up and amplify a distributional bias in the input”. Rhode (2009) investigated the relationship between the input learners are exposed to and the distribution of *-ing* inflected verbs in learners’ productions. In line with the Distributional Bias Hypothesis, he found that the most frequently used inherent lexical verb class in the L1 input is activities followed by accomplishments and a relatively low number of achievements. In contrast, while in the L2 data activities are also the most frequently used class, a clear preference is shown for achievements over accomplishments.

Another recurrent account is L1 influence. Shirai (2004: 105) notes that “even though the acquisition of inflectional morphology is not heavily influenced by L1 transfer, there still is a strong effect of L1”. Two recent studies offer good illustrations: the study on the acquisition of the English past tense by French-L1 learners by Ayoun and Salaberry (2008), and the study focusing on the perfective/imperfective comparing Anglophones and Hispanophones learning English by Izquierdo and Collins (2008). However, the effect on the progressive is unclear. Shirai (2004) argues that while Rhode’s (1996) finding of an early association of the progressive with achievements could be interpreted as related to the lack of progressive marker in the learner’s L1 (German), other studies do not confirm this interpretation. These are studies involving L1s that do not have progressive markers and yet confirm the AH as well as studies involving L1s that have progressive markers but do not support the developmental prediction of the AH (see Shirai 2004 for a review). Alternative explanations have been provided from generative positions, such as the underspecification of the child’s L2 grammar for grammatical aspect (Gavruseva 2002: 125). Namely, in Gavruseva’s study the child’s verbs are unspecified for telicity and so they tend to appear in a non-finite form.

Finally, Shirai (2004: 104) posits a multiple factor account for findings that confirm the common trend predicted by the AH as well as for findings that show deviations from it (i.e., a stronger prototypical association at later stages than at early stages). This multiple factor account includes learner internal factors and learner external factors. Among the former, universal predispositions on the part of the learner contribute to the general tendencies found, whereas individual differences and the learner’s L1 are internal factors that may contribute to the diversity also found. The latter include input and interaction, as well as instructional factors. Also Housen points out that a series of factors may

be at play in the acquisition of morphology, namely the influence of the input, the influence of L1-based predispositions to acquisition, the morphophonemic properties of the respective tense and aspect (TA) categories, and the processing mechanisms that operate at a particular point in the acquisition of a given TA category (Housen 2002: 190).

As the above review shows, previous studies have varied widely in the methodology used in their exploration of the Aspect Hypothesis. Furthermore, it may be argued that most studies have overlooked three important methodological issues in their study design. First, studies have used a variety of elicitation tasks including spontaneous speech (e.g., Hazdenar 2007; Gavrusseva 2002), oral interviews (e.g., Robison 1990, 1995; Shirai 1998), oral or written narratives (e.g., Bardovi-Harlig and Bergström 1996), cloze tasks (e.g., Collins 2004; Collins and Izquierdo 2008), or a combination of tasks (e.g., Housen 2002). It remains an issue whether the tasks used to elicit the data can have an effect on the results introducing uncontrolled variability (see Comajoan [2005] for a discussion of task effects in research on the acquisition of imperfect in Romance languages). Shirai (2004) notes that studies that analyze production data, whether they are free production or elicited production, often show stronger prototypical association at later stages rather than at the earliest stages. In contrast, studies using a cloze-type task in which learners are asked to change the base forms of verbs into appropriate morphological forms in context often show patterns consistent with the hypothesis. Another methodological aspect worthy of exploration is the use of types or tokens in research in this area. As it has been observed, only a few studies have included a calculation of both tokens and types (e.g., Housen 2002), and it is again an issue whether results vary when types are calculated as opposed to just tokens, especially with uncontrolled tasks. Finally, while some studies have used L2 learners coming from intact groups (Bardovi-Harlig and Reynolds 1995; Housen 2002; Collins 2004) few studies (Robison 1995; Slabalova 1999) have reported on how progressive is used at different levels of proficiency. This is especially relevant in relation to the developmental component of the AH.

The present study attempts to contribute to the area of research of the AH by providing an analysis of how learners' productions match the AH while at the same time filling the above mentioned gaps in prior research. That is to say, the present study aims at discovering the effects of different task types and of including both token and type counts in the analysis of the AH, while strictly controlling the participants' proficiency levels. To further these aims, the present study groups learners into four different proficiency groups and examines their productions in two different task types, contrasting token-based and type-based results.

3. The progressive in Catalan/Spanish and in English

Before we present the specific research questions of this study we believe it important to briefly compare the progressive in the learners' L1(s) and in the L2. Because there are no relevant differences in the use of the progressive in the two first languages of the learners in this study, we will refer to Catalan and Spanish indistinctively in this section and in contrast to English. To begin with, in these two Romance languages the periphrastic verb combination *estar* + gerund is not considered part of the verbal paradigm. More importantly, although Catalan and Spanish generally use the progressive to characterize events as ongoing or in progress, as English does, they relate this shared meaning of ongoingness to those of the simple tenses quite differently from English. In English the progressive forms are used to indicate that an action is happening at a specific moment, for habitual actions, or to state general truths.³ In contrast, the progressive forms are used in Catalan and Spanish only for emphasis, for example, to explicitly express that an action is taking place at a particular moment, as opposed to another time, or to stress the continuity of an action (Spinelli 2003: 76) (see examples (1) and (2)⁴).

- (1) What *is* your sister *studying* at UCLA? (in general over a period of time)

Cat.: Què *estudia* la teva germana a UCLA?

Sp.: ¿Qué *estudia* tu hermana en UCLA?

- (2) What *is* your sister *studying* now? (at this particular time)

Cat.: Què *està estudiant* / *estudia* la teva germana ara?

Sp.: ¿Qué *está estudiando* / *estudia* tu hermana ahora?

3. In addition, in English both the *-ing* forms and the simple tenses can be used to express an anticipatory meaning (the former with an added meaning of intentionality) whereas in Catalan and Spanish the progressive periphrasis is excluded in this context (Whitley 1986: 116).

4. Example 2 illustrates another important difference: whereas the progressive aspect is realised in English by the progressive forms only, both the simple tense form and the progressive periphrasis are used in Catalan and Spanish. That is to say, there is a partial overlap in meaning in Catalan and Spanish since both forms are usable in progressive contexts, which determines a degree of optionality in these languages that does not exist in English. In situations of language contact (English and Spanish), this lack of optionality in English has been observed to have an influence on the proportion of use of simple and *-ing* forms in Spanish, with Spanish-English bilinguals increasing the use of the latter in relation to Spanish monolinguals (Klein 1980).

250 *Carmen Muñoz and Roger Gilabert*

4. Research question and hypothesis

In line with previous research on the influence of inherent lexical aspect on L2 acquisition, our first research question focuses on the extent to which Catalan-Spanish instructed learners of English follow the route predicted by the AH. On the basis of previous findings we hypothesize that learners will follow the AH, marking activity verbs first and accomplishment and achievement verbs later, with a negligible extension to state verbs. Our second research question addresses the issue of a possible task-type effect on learners' productions and asks, specifically, whether an oral interview and a picture retelling narrative yield similar results.

5. Methodology

5.1. Participants

A first sample of data from 147 Catalan-Spanish EFL learners was screened for productions of *-ing* forms or attempts at progressive forms. They were all bilingual in Catalan and Spanish, although some dominant in one or the other language. Of these, 111 were secondary school pupils (grades 9, 11, and 12) and 36 were university students. The group of secondary school students ranged in age from 14/15 to 17/18 and they had had classroom exposure to English that ranged from 4 to 7 years. The group of university students ranged in age from 18 to 33 and their classroom exposure ranged from 9 to 19 years.

Native speaker data were obtained from narratives produced in English-L1 and in Spanish-L1. Each group comprised 11 young adults.

5.2. Elicitation tasks

Two types of oral data were collected and analyzed: an interview and a picture-elicited narrative. Learners were audio-recorded while performing the tasks in a face-to-face situation with a researcher. The semi-guided interview began with a series of questions about the subject's family, daily life and hobbies, which constituted a warm-up phase and helped build rapport with the learners. A few previously established questions elicited answers with different time references (present, past and future), but in general interviewers accepted learner-initiated topics in order to create as natural and interactive a situation as possible. The average length of the interviews was 6.5 minutes. For the second task, learners were shown "The dog story" in a set of six pictures (from Heaton 1966), which the subjects could freely look at before and while they were telling the story in the presence of the researcher. In the story there are two main protagonists, a

boy and a girl, who are getting ready for a picnic; a secondary character, their mother; and a character that disappears and later reappears: a dog that gets into the food basket and eats the children's sandwiches. The retelling of this story took 1 minute on average.

6. Analysis and results

When the initial sample of data from 147 learners was screened for productions of *-ing* forms or attempts at progressive forms, it was found that 34 participants did not produce a single progressive form in either of the tasks and were excluded from the analysis. The final sample consisted of 113 participants: 77 secondary school pupils (grades 9, 11, and 12) and 36 university students. Of these, 49 were males and 64 were females.

Because of the high intra-group variability in proficiency level of school students, it was deemed convenient to redistribute the learners into groups on the basis of an independent test of English proficiency. Therefore, the secondary school pupils were distributed into three proficiency groups on the basis of their scores in a cloze test (the test contained 30 items and did not target tense-aspect forms). The lowest level group (G1) can be characterized as the elementary group; it contained 12 learners whose scores in the cloze test ranged from 0 to 11. The second group (G2), characterized as low intermediate, contained 19 learners with scores between 12 and 21. The third group (G3), with 46 learners, could be characterized as of intermediate level with scores between 22 and 30. There were 36 university students (G4) and they belonged to a high-intermediate level, most being English majors. A total of 3458 verb forms were analysed in this study. All verb forms were classified for tense and morphology and only correct forms were further analyzed. The oral data was transcribed and codified using the CHILDES subprogram CLAN and the transcription convention CHAT (MacWhinney 1995). Three types of information were attached to the *-ing* forms: lexical (activity, accomplishment, achievement, stative) – see Appendix for the tests used in order to classify the verb forms into the four lexical aspect categories, adopted from Shirai and Andersen (1995: 749) –, morphological (regular or “proto-progressive”⁵): omission of auxiliary or *-ing* form, use of L1, time reference (past, present, future). In this paper we will only use the first type of information concerning the association of the progressive morphology with the four lexical categories. Inter-rater

5. Additional codes were used for what we termed “proto-progressives”, those were approximations to the target form in which either the auxiliary was absent (he preparing food), or the *-ing* suffix was missing (the dog is find), or the L1 is used (they are preparando [preparing]). These forms are not analyzed in this paper.

Table 1. *-ing forms produced in the two tasks*

	Achievement		Accomplishments		Activity		Stative	
	Types	Tokens	Types	Tokens	Types	Tokens	Types	Tokens
G1 n=12	1	1	12	16	9	10	0	0
G2 n=19	0	0	18	18	26	31	0	0
G3 n=46	12	12	76	83	82	97	4	5
G4 n=36	20	21	81	96	90	101	2	2

Table 2. *-ing forms elicited by the narrative task*

	Achievement		Accomplishments		Activity		Stative	
	Types	Tokens	Types	Tokens	Types	Tokens	Types	Tokens
G1 n=12	1	1	11	13	5	6	0	0
G2 n=19	0	0	15	15	10	10	0	0
G3 n=46	11	11	69	75	51	62	2	2
G4 n=36	14	15	74	88	58	61	1	1

reliability was estimated on 20 % of the data, which were randomly selected, with satisfactory results (85 % agreement) and doubtful cases were discussed until an agreement was reached. Both verb token counts and verb type counts were conducted since there does not seem to be a consensus in the previous literature on which of the two, a type analysis or a token analysis, is best for testing the AH (see Housen 2002: 176).

Tables 1 to 3 show the descriptive statistics of the data. To begin with, Table 1 displays the occurrences of *-ing* forms (types and tokens) with the four classes of verbs in tokens as well as in types (the types used by each subject are added up). The increase of progressive forms with proficiency level is clearly seen in the different classes of predicates with the exception of stative verbs which present only a few exceptional occurrences. The ratio of *-ing* forms per learner is 2.2 in group 1, and 2.6 in group 2, whereas there is a large increase in the intermediate and high intermediate groups with 4.3 and 3.6, respectively.

Tables 2 and 3 display the occurrence of *-ing* forms (types and tokens) that were elicited by the interview and the narrative tasks, respectively. It can be observed that *-ing* forms are much more frequently used in the narratives than in the interviews.

In order to answer the first research question, concerning an association of the progressive aspect with activity verbs in the early stages of acquisition, and a later extension to accomplishments and achievements, a series of statistical tests were run on the aggregate data from the two tasks (displayed in Table 1).

Table 3. *-ing forms elicited by the interview task*

	Achievement		Accomplishments		Activity		Stative	
	Types	Tokens	Types	Tokens	Types	Tokens	Types	Tokens
G1 n=12	0	0	1	3	4	4	0	0
G2 n=19	0	0	3	3	16	21	0	0
G3 n=46	1	1	7	8	31	35	2	3
G4 n=36	6	6	7	8	32	40	1	1

Table 4. *Significant differences between aspectual classes in the four proficiency groups*

G1	G2	G3	G4
Acc > stat	Acc > stat	Acc > stat	Acc > stat
Acc > ach	Acc > ach	Acc > ach	Acc > ach
Act > stat	Act > stat	Act > stat	Act > stat
	Act > ach	Act > ach	Act > ach
		Ach > stat (only types)	Ach > stat

Since the data were not normally distributed, non-parametric tests were chosen. First of all, a Friedman test showed a significant difference between the four aspectual categories ($\chi^2 = 177.034$; $p < .001$). A series of Wilcoxon Signed Rank tests run on the tokens produced by the participants in the two tasks revealed significant differences between activity and stative verbs, accomplishment and stative verbs, and accomplishment and achievement verbs in all groups, and between activity and achievement verbs in groups 2, 3, and 4, as well as between achievement and stative verbs in group 4. The same pattern of results was found when the statistical tests were run on the types produced by the participants in the two tasks, though there the difference between achievement and stative verbs was significant in group 3 as well as in group 4 (see Table 5).

The results of the statistical analysis indicate that progressive forms are at first more markedly associated with accomplishment predicates, followed by activity predicates. When proficiency increases (group 2), activity predicates outnumber accomplishment predicates; thereafter, the difference between these two types of predicates on the one hand and achievement and stative predicates on the other becomes stronger, and there is a very limited extension of progressive marking to achievement predicates and an even more limited extension to stative verbs. It is also evident that stative verbs form a class on their own, and in the most advanced group differences between stative predicates and the other three lexical classes are all significant (see Table 5).

At this point it may be said that the data analyzed in this study conform to the Aspect Hypothesis only partially. The AH predicts an association between progressive morphology and activity verbs and a later extension of this association to accomplishment and achievement verbs, and only marginally to stative verbs. In these data the marginality of the association with stative verbs is confirmed, but the prototypical association with activity verbs in the initial stage is not. Instead, there is an unexpected higher presence of accomplishment predicates than of activity predicates in group 1, although the difference is not significant. Later on, though activity predicates outnumber accomplishment predicates from group 2 onwards, the difference is never significant.

In order to address the second research question, that enquires whether task type had an effect on the association of progressive marking to aspectual categories, Wilcoxon Signed Rank tests were run separately for the data elicited by the narrative task and the data elicited by the interview task (see Tables 6 and 7). A comparison of the results concerning tokens in the two tasks shows first of all significant differences between accomplishment predicates and stative and achievement predicates in the narrative task already in group 1, and that these differences are significant across the four proficiency groups. In contrast, the data from the interview task yields only one significant difference, between accomplishment and achievement verbs in group 3. Another difference between the patterns of significant differences in the two tasks appears in the comparison between accomplishment and activity predicates: a significant difference is found only in group 4 in the data from the narrative task in favour of accomplishment verbs, whereas in the data elicited by the interview task significant differences are found in groups 2, 3, and 4 in favour of activity verbs. The comparison of the results concerning types shows similar patterns except for the difference between activity verbs and accomplishment verbs in the data elicited by the narrative task from group 4, which then does not reach significance.

In sum, the statistical tests reveal that the variable task had a significant effect on the production of accomplishment predicates, mainly, and that this influence is seen in the fact that accomplishment verbs outnumber verbs from the other aspectual classes only in the data elicited by the narrative task, both for types and for tokens. On the other hand, activity verbs constitute the most frequent verb category in the productions from the four proficiency groups elicited by the interview task, again in both the type and the token counts.

An examination of the story that was depicted in the pictures reveals that it features characters performing actions which include an endpoint (such as *prepare a picnic*, *cut the bread* or *eat the sandwich*), which may account for the higher frequency of this class of predicates in both the token and the type count. In order to confirm this task effect, further analyses were undertaken on two sets of data elicited by the same narrative task: a set of 11 narratives

Table 5. Differences between the aspectual categories with data from the two tasks

Group	ACT-STA		STA-ACC		ACH-ACC		ACT-ACH		ACH-STA	
	Types	Tokens	Types	Tokens	Types	Tokens	Types	Tokens	Types	Tokens
Gr 1	-2.121b*	-2.060b*	-2.428a*	-2.414a*	-2.165a*	-2.157a*	n.s.	n.s.	n.s.	n.s.
Gr 2	-3.475b**	-3.457b**	-2.877a**	-2.877a**	-2.877a**	-2.877a**	-3.475b**	-3.457b**	n.s.	n.s.
Gr 3	-5.301b***	-5.292b***	-5.220a***	-5.263a***	-5.108a***	-5.171a***	-4.955b***	-5.145b***	-2.000b*	n.s.
Gr 4	-4.487b***	-4.475b***	-4.567a***	-4.567a***	-4.241a***	-4.306a***	-4.136b***	-4.137b***	-3.140b**	-3.126b**

Table 6. Differences between the aspectual categories with data elicited from the narrative task

Group	ACT-STA		STA-ACC		ACH-ACC		ACT-ACC		ACT-ACH		ACH-STA	
	Types	Tokens	Types	Tokens	Types	Tokens	Types	Tokens	Types	Tokens	Types	Tokens
Gr 1	n.s.	-2.810a**	-2.807a**	-2.486a*	-2.486a*	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gr 2	-2.428b*	-2.879a**	-2.879a**	-2.879a**	-2.879a**	n.s.	n.s.	-2.428b*	-2.428b*	n.s.	n.s.	n.s.
Gr 3	-4.715b***	-4.701b***	-5.188a***	-4.948a***	-5.028a***	n.s.	n.s.	-3.743b***	-4.035 b***	-2.496b*	-2.496b*	-2.496b*
Gr 4	-4.608b***	-4.600b***	-4.825a***	-4.765a***	-4.660a***	n.s.	-2.506a*	-4.081b***	-4.158b***	-2.588b**	-2.754b**	-2.754b**

Table 7. Differences between the aspectual categories with data elicited from the interview task

Group	ACT-STA		ACH-ACC		ACT-ACC		ACT-ACH	
	Types	Tokens	Types	Tokens	Types	Tokens	Types	Tokens
Gr 1	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gr 2	-3.066b**	-3.025b**	n.s.	-2.356b*	-2.448b*	-3.066b**	-3.066b**	-3.025b**
Gr 3	-4.874b***	-4.725b***	-2.121a*	-3.757b***	-3.646b***	-4873b***	-4873b***	-4.685b***
Gr 4	-3.691b***	-3.655b***	n.s.	-2.871b**	-2.944a*	-3.096b***	-3.096b***	-3.260b***

Table 8. *Use of -ing forms in the narrative task in English (L1) and Spanish (L1)*

	Achievement		Accomplishments		Activity		Stative	
	Types	Tokens	Types	Tokens	Types	Tokens	Types	Tokens
ENSs n=11	–	–	18	20	22	25	–	–
C-SNSs n=11	2	2	14	18	11	13	–	–

produced by NSs of English, and a set of 11 narratives produced by NSs of English, and a set of 11 narratives produced by NSs of Catalan-Spanish (C-SNSs).⁶ Table 8 suggests that speakers were compelled by the story into using a large amount of accomplishment predicates in their L1, which confirms that the distribution found was a result of the task rather than a feature of the learners' interlanguage.

In sum, it may be claimed that the frequent use of certain predicates that were required by the story plot of the narrative task had an influence on the distribution of *-ing* forms that was different from the distribution of *-ing* forms in the interview. This very high frequency of accomplishment predicates may also account for the deviation from the prediction of the AH shown by these data.

7. Discussion

The first research question addressed in this study focused on the extent to which Catalan-Spanish instructed learners of English follow the route predicted by the AH. We hypothesized that we would find evidence that these learners follow the AH, marking activity verbs first and accomplishment and achievement verbs later, with a negligible extension of the progressive marking to stative verbs. The analyses run on the data seemed to show only a partial confirmation of the hypothesis. On the one hand, stative verbs are only very marginally marked for progressive aspect, as expected. Ungrammatical progressive states have been found in learners with little or no L2 instruction (Robison 1990; and Rhode 1996, respectively), as well as in tutored learners (Collins 2002; Housen 2002) but not in all cases (Bardovi-Harlig 1992; Bardovi-Harlig & Bergstöm 1996). In our study, ungrammatical progressive states appear when progressive forms are more frequent, that is, in the intermediate and high-intermediate groups, but their frequency can be considered to be negligible.

6. The narratives used here were produced in Spanish. Narratives were also elicited in Catalan by means of the same task, and no differences relevant to this study were observed.

On the other hand, there appear to be more accomplishment predicates marked for progressive aspect than activity predicates in the productions of the participants with the lowest level of proficiency, and the extension of progressive marking to achievement predicates is observed at the two higher levels of proficiency, but this is very limited. Therefore, although it may still be claimed that progressive marking is initially associated with durative verbs, the association is stronger with accomplishment verbs than with activity verbs in the earliest stage. This finding appears to contradict the developmental component of the AH confirmed by previous studies (e.g., Rocca 2002; Gavrusseva 2002), according to which *-ing* is associated with activity verbs at early stages and spreads to other nonprototypical verbs at later stages. However, the finding is in line with a number of studies that have shown that the association of activities with the progressive is not necessarily stronger at the lower levels of proficiency (e.g., Robison 1995; Bardovi-Harlig & Bergström 1996; Bardovi-Harlig 1998; Clachar 2004). As will be seen below when discussing the results of the second research question, such findings may be at least partially explained in terms of how the internal structure of the task used to elicit data influenced the associations between lexical aspect and morphology that learners made.

The second research question asked whether task type would have an effect on the association of progressive marking to aspectual categories. The analyses have shown a strong task effect, in that accomplishment predicates outnumber all other types of predicates in the data from the narrative task whereas activity predicates have the highest frequency in the data from the interview task. More importantly, it can be seen that the high frequency of accomplishment predicates elicited by the narrative task accounts for their higher frequency relative to activity predicates that is observed when the data from the two tasks are collapsed. This in turn helps interpret the findings above concerning the partial mismatch with the predictions derived from the AH (and yet – as a reviewer observes – these data show that learners have no problem in producing accomplishment predicates that are marked for progressive aspect at the initial stages). In addition, the comparison of productions from native speakers of the source and the target languages elicited by means of the narrative task showed that both groups of speakers produced similar distributions of types and tokens associated with activity and accomplishment verbs. In both cases, L1 speakers produced large amounts of accomplishment predicates in the narrative task and so these data confirm that the distribution found was a result of the task rather than a feature of the learners' interlanguage.

It was seen that the story depicted in the pictures shows actions that have a clear end state (*cutting the bread* or *pouring tea into a thermos*) and that cannot be omitted from the corresponding narrative (or description of the pictures). This has had a strong influence on the frequency of accomplishments. In contrast, the data from the interview task followed the prediction of the AH more

closely. The task effects found in this study are reminiscent of the results found by Ayoun and Salaberry (2008) in a study of the acquisition of L2 English past tense morphology. Ayoun & Salaberry (2008) found differences in the results from a cloze task and from a narrative, with the outcome of the former being similar to the findings obtained by Collins (2002, 2004) who also used a cloze task to elicit learners' data. The unexpected results in the narratives (i.e., state verbs were marked with past tense morphology more consistently than telic verbs) run counter to the predictions of the AH. Ayoun & Salaberry (2008: 581) speculate that the distinct outcome might be associated with task effects and that a cloze task might allow for the monitoring of language form whereas narratives can tap more directly into the learners' competence. Shirai (2004) also sees a role for the monitoring of language form in discrete point tasks, in his explanation of the different results obtained by studies that use production data and discrete point tasks, respectively. According to Shirai, only the former show that the prototypical association of the progressive with activity verbs becomes stronger as the learner's proficiency increases, calling into question the developmental claim of the AH. Shirai argues that in L2 acquisition the initial forms observed in the studies that use production data may be memorized forms produced in situations in which learners need to produce forms beyond their capacity. That is to say, "early on these forms are produced haphazardly before the actual form- meaning relationship is solidified". (2004: 103). Later on, when learners begin to notice the association between progressive and activity meaning, prototypical use will increase. However, in the present study the comparison of two production tasks, a free production task and an elicited production task, has shown a deviation from the developmental prediction of the AH in the latter and not in the former. In other words, whereas there seems to be evidence that data from production tasks do not easily conform to the developmental claim of the AH, the present study has revealed that the constraints posed by the internal structure of the task used to elicit data may have a significant influence on learners' choice of verbs. The effect of the task (i.e., the elicitation of accomplishment verbs) weakens as a function of increasing proficiency in group 2, when learners start producing more inflected activities.

In view of the task effects revealed by the present study, future studies should consider task type as a relevant factor in their design and analysis. For example, it does not seem advisable to collapse data from different tasks when examining the AH or other similar hypotheses that are concerned with specific language forms. When the research focus is the AH, it is evident that carefully controlled tests that elicit the same amount of verb types and verb tokens may yield clearer results than other kind of tasks in which the researcher cannot control for the verb types that speakers decide to use nor for their frequency.

The need to control for learners' proficiency level in connection with the AH is evident in this study. First of all, the reliable picture of the initial stages of

acquisition of the progressive marking in Catalan-Spanish learners of English that we have obtained has allowed us to observe that *-ing* marking emerges slowly in the production of beginner learners, as was noted by Bardovi-Harlig & Bergström (1996) as well. It is not until the intermediate proficiency group (group 3) that a large increase of *-ing* forms is observable, at the time when the progressive marking spreads to achievement verbs as well. The thorough assessment of the learners' levels of proficiency in this study, in contrast to the majority of previous studies (as suggested by Ayoun & Salaberry 2008), adds reliability to the acquisitional picture obtained. We believe this is an important contribution of the present study and a necessary requirement in order to address the developmental claim of the AH.

Another methodological issue that could be addressed in this study is the convenience of using types or tokens in the examination of the AH, an issue on which there is no consensus yet (see for a discussion Housen 2002; see also Collins 2002). In this study, the number of types per group results from adding up the types produced by each learner in the group. That is to say, repeated verb types have not been discarded from the count in order to give a faithful representation of learners' type use. The separate analyses with types and tokens have not produced large differences: only in the case of the comparison between achievement and stative verbs in group 3 is the difference significant for types and not for tokens, while in group 4 the difference is significant for tokens as well. This indicates that a type measure is probably more sensitive than a token measure, having more potential to reveal small differences between categories. In addition, using types prevents the possible distortion that may result from the frequent use of a few verb forms in spontaneous tasks (see Housen 2002). In this line, and though most previous studies have only used a token analysis, to conduct both a type and a token analysis seems to give a more complete picture of the learners' acquisition.

8. Conclusion

The results obtained in this study on the uses of the progressive by instructed Catalan-Spanish learners of English are consistent with previous research according to which *-ing* morphology is closely associated with durative lexical aspect. However, the prototypical association with activity predicates at the earliest stages predicted by the AH has only been confirmed with the data elicited by the interview task, whereas the narrative task has yielded an unexpectedly higher association of the progressive with accomplishment predicates. As a result, the abundant production of accomplishment verbs elicited by the narrative task has outnumbered the production of activity verbs at the earliest stage, although there are few instances of either, and the difference is not significant.

The analyses have revealed a strong task effect that seems to account for the mismatch observed with respect to the prediction of the AH. The comparison with the data from the native speakers' productions in the same narrative task has provided strong confirmation of this task effect. Future research should further explore the interrelation of task effect with proficiency that was underlined by Shirai (2004) and that, as has been observed in this study, may require a more detailed task typology than a mere separation between production and discrete-item tasks (see Comajoan 2005).

Learners' acquisition of progressive forms may have been influenced by both their L1 (e.g., Rocca 2002) and the instructional setting in which they learn the English language (e.g., Collins 2004). Although this was not examined in our study, it remains an issue how the students' L1 may have influenced the different levels of use and perhaps also the patterns of associations at different levels of proficiency. In addition, further research in this context should look at how the input learners are exposed to may shape the associations students make (e.g., *-ing* with activities in spontaneous use of English in the classroom), which may reveal the existence of a bias in the distribution of input as suggested by Shirai & Andersen (1995), and Rhode (1996), among others. Further studies on the input learners are exposed to (as in Collins et al. 2009) will certainly enrich and complete the picture of how progressive marking develops in these tutored learners of English.

Universitat de Barcelona
 <munoz@ub.edu>
 <rogergilabert@ub.edu>

Appendix

Tests used for the classification of verbs into categories from Shirai & Andersen (1995:749).

Step 1: State or nonstate

Does it have a habitual interpretation in simple present tense?
 If no → State (e.g., *I love you*)
 If yes → Nonstate (e.g. *I eat bread*) → Go to Step 2

Step 2: Activity or nonactivity

Does 'X is Ving' entail 'X has Ved' without an iterative/habitual meaning? In other words, if you stop in the middle of Vig, have you done the act of V?
 If yes → Activity (e.g., *run*)
 If no → Nonactivity (e.g., *run a mile*) → Go to Step 3

Step 3: Accomplishment or achievement

[If test (a) does not work, apply test (b), and possibly (c).]

- (a) If 'X Ved in Y time (e.g., 10 minutes)', then 'X was Ving during that time'.

If yes → Accomplishment (e.g., *He painted a picture*)

If no → Achievement (e.g., *He noticed a picture*)

- (b) Is there ambiguity with *almost*?

If yes → Accomplishment (e.g., *He almost painted a picture* has two readings: he almost started to paint a picture / he almost finished painting a picture.)

If no → Achievement (e.g., *He almost noticed a picture* has only one reading)

- (c) 'X will VP in Y time (e.g., 10 minutes)' = 'X will VP after Y time'.

If no → Accomplishment (e.g., *He will paint a picture in an hour* is different from *He will paint a picture after an hour*, because the former can mean that he will spend an hour painting a picture, but the latter does not.)

If yes → Achievement (e.g., *He will start singing in two minutes* can have only one reading, which is the same as in *he will start singing after two minutes*, with no other reading possible).

References

- Andersen, Roger & Yasuhiro Shirai. 1994. Discourse motivations for some cognitive acquisition principles. *Studies in Second Language Acquisition* 16. 133–156.
- Andersen, Roger & Yasuhiro Shirai. 1996. The primacy of aspect in first and second language acquisition: The pidgin-creole connection". In William Ritchie & Tej Bhatia (eds.), *Handbook of Second Language Acquisition*, 527–570. London: Academic Press.
- Ayoun, Dalila & M. Rafael Salaberry. 2008. Acquisition of English tense-aspect morphology by advanced French instructed learners. *Language Learning* 58(3). 555–595.
- Bardovi-Harlig, Kathleen. 1992. The relationship of form and meaning: a cross-sectional study of tense and aspect in the interlanguage of learners of English as a second language. *Applied Psycholinguistics* 13(3). 253–278.
- Bardovi-Harlig, Kathleen. 1998. Narrative structure and lexical aspect: Conspiring factors in second language acquisition of tense-aspect morphology. *Studies in Second Language Acquisition* 20. 471–508.
- Bardovi-Harlig, Kathleen. 2000. *Tense and aspect in second language acquisition: Form, meaning, and use*. Oxford: Blackwell.
- Bardovi-Harlig, Kathleen & Anna Bergström. 1996. Acquisition of tense and aspect in second language and foreign language learning: learners narratives in ESL and FFL. *The Canadian Modern Language Review* 52. 208–330.
- Bardovi-Harlig, Kathleen & Dudley W., Reynolds. 1995. The role of lexical aspect in the acquisition of tense and aspect. *TESOL Quarterly* 29(1). 107–131.

- Brown, Roger. 1973. *A first language*. Cambridge, Mass.: Harvard University Press.
- Clachar, Arlene. 2004. The construction of Creole-speaking students' linguistic profile and contradictions in ESL literacy program. *TESOL Quarterly* 38(1). 153–165.
- Collins, Laura. 2002. The roles of L1 influence and lexical aspect in the acquisition of temporal morphology. *Language Learning* 52(1). 43–94.
- Collins, Laura. 2004. The particulars on universals: a comparison of the acquisition of tense-aspect morphology among Japanese- and French-speaking Learners of English. *The Canadian Modern Language Review* 61(2). 251–274.
- Collins, Laura, Pavel Trofimovich, Joanna White, Walcir Cardoso & Marlise Horst. 2009. Some input on the easy/difficult grammar question: An empirical study. *The Modern Language Journal* 93(3). 336–353.
- Comajoan, Llorenç. 2005. The emergence of L2 imperfective morphology in narrative retellings and conversations. [Special issue]. *Catalan Review* 19. 79–108.
- Gavrusseva, Elena. 2002. Is there a primacy of aspect in child L2 English? *Bilingualism: Language and Cognition* 5(2). 109–130.
- Haznedar, Belma. 2007. The acquisition of tense-aspect in child second language English. *Second Language Research* 24(4). 383–417.
- Heaton, John Brian. 1972 [1966]. *Composition through Pictures*. 2nd ed. London: Longman.
- Housen, Alex. 1995. *It's about time: The acquisition of temporality in English as a second language in a multilingual educational context*. Brussels: University of Brussels dissertation.
- Housen, Alex. 2002. The acquisition of tense-aspect in English as a second language and the variable influence of inherent aspect. In Rafael Salaberry & Yasuhiro Shirai (eds.), *The L2 acquisition of tense-aspect morphology*, 155–197. Amsterdam: Benjamins.
- Huang, Chiung-chih. 1993. *Distributional bias of verb morphology in native and non-native English discourse*. Los Angeles: University of California MA thesis.
- Huang, Chiung-chih. 1999. Tense-aspect marking by two learners of English and native English speakers: Inherent lexical aspect and unitary vs. repeated situation types. *Issues in Applied Linguistics* 10. 113–130.
- Izquierdo, Jesús & Laura Collins. 2008. The facilitative role of L1 influence in tense-aspect marking: A comparison of Hispanophone and Anglophone learners of French. *The Modern Language Journal* 92. 350–368.
- Klein, Flora. 1980. A quantitative study of syntactic and pragmatic indications of change in the Spanish of bilinguals in the U.S. In William Labov (ed.), *Locating language in time and space*, 69–82. New York: Academic Press.
- Krashen, Stephen. 1977. Some issues relating to the Monitor Model. In H. Douglas Brown, Carlos Yorio & Ruth Crymes (eds.), *TESOL '77*. 144–158. TESOL, Washington, D.C.
- Lee, Eun-Joo. 2001. Interlanguage development by two Korean speakers of English with a focus on temporality. *Language Learning* 51. 591–633.
- Legun, S. 1969. *On recording samples of informal speech*. Working paper, Southwest Regional Laboratory, Inglewood, California.
- Li, Ping & Yasuhiro Shirai. 2000. *The acquisition of lexical and grammatical aspect*. Berlin: Mouton de Gruyter.
- MacWhinney, Brian J. 1995. *The CHILDES Project: Computational tools for analyzing talk*. Hillsdale NJ: Lawrence Erlbaum.
- Muñoz, Carmen. 2006. Accuracy orders, rate of learning and age in morphological acquisition. In Carmen Muñoz (ed.), *Age and the rate of foreign language learning*, 107–126. Clevedon: Multilingual Matters.
- Pica, Teresa. 1983. Adult acquisition of English as a second language under different conditions of exposure. *Language Learning* 33: 465–497.
- Rhode, Andreas. 1996. The aspect hypothesis and the emergence of tense distinctions in naturalistic L2 acquisition. *Linguistics* 34: 1115–1137.

More evidence concerning the aspect hypothesis 263

- Rhode, Andreas. 2002. The aspect hypothesis in naturalistic acquisition: What uninflected and non-target-like verb forms in early interlanguage tell us. In Rafael Salaberry & Yasuhiro Shirai (eds.), *The L2 acquisition of tense-aspect morphology*, 199–220. Amsterdam: Benjamins.
- Rhode, Andreas. 2009. Input frequency and the acquisition of the progressive. In Thorsten Piske & Martha Young-Scholten (eds.), *Input Matters in SLA*, 29–46. Clevedon: Multilingual Matters.
- Robison, Richard E. 1990. Aspectual marking in English interlanguage. *Studies in Second Language Acquisition* 12: 315–330.
- Robison, Richard E. 1995. The aspect hypothesis revisited: a cross-sectional study of tense and aspect marking of interlanguage. *Applied Linguistics* 16(3): 344–370.
- Rocca, Sonia. 2002. Lexical aspect in child second language acquisition of temporal morphology: A bidirectional study. In Rafael Salaberry & Yasuhiro Shirai (eds.), *The L2 acquisition of tense-aspect morphology*, 249–284. Amsterdam: Benjamins.
- Shirai, Yasuhiro. 1991. Primacy of aspect in language acquisition: simplified input and prototype. Los Angeles: University of California dissertation.
- Shirai, Yasuhiro. 2004. A multiple-factor account for form-meaning connections in the acquisition of tense-aspect morphology. In Bill van Patten et al. (eds.), *Form- meaning connections in second language acquisition*, 91–112. Mahwah, NJ: L. Erlbaum Associates.
- Shirai, Yasuhiro & Roger W. Andersen. 1995. The acquisition of tense-aspect morphology: A prototype account. *Language* 71(4): 743–762.
- Slabakova, Roumyana. 1999. The parameter of aspect in second language acquisition. *Second Language Research* 15: 283–317.
- Slobin, Dan Isaac. 1973. Cognitive prerequisites for the acquisition of grammar. In Charles Ferguson & Dan Isaac Slobin (eds.), *Studies in child language acquisition*. New York: Holt, Rinehart & Winston.
- Spinelli, Emily. 2003. *English grammar for students of Spanish*. The Olivia & Hill Press.
- Sugaya, Natsue & Yasuhiro Shirai. 2007. The acquisition of progressive and resultative meanings of the imperfective aspect marker by L2 learners of Japanese. *Studies in Second Language Acquisition* 29. 1–38.
- Vendler, Zeno. 1967. “Verbs and times”. In Zeno Vendler (ed.), *Linguistics in philosophy*, 97–121. Ithaca: Cornell University Press.
- Wagner-Gough, Judy. 1978. Excerpts from comparative studies in second language learning. In Evelyn M. Hatch (ed.), *Second language acquisition. A book of readings*, 155–171. Rowley, Mass.: Newbury House Publishers.
- Whitley, M. Stanley. 1986. *Spanish/English Contrasts: A Course in Spanish Linguistics*. Georgetown University Press.