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Acquisition of L2 English verb morphology: The aspect hypothesis tested

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“It is (…) largely a matter of historical accident that the notion of aspect does not figure out as prominently in traditional grammar as does the notion of tense. Aspect is, in fact, far more commonly to be found throughout the languages of the world than tense is: there are many languages that do not have tense, but very few, if any, that do not have aspect.”
(John Lyons, 1977: 705)

RESUMO

Este estudo tem por objetivo investigar a chamada “aspect hypothesis”, segundo a qual todos os indivíduos, tanto em contextos de aquisição de primeira como de segunda língua, seguem determinados princípios universais na aquisição da morfologia verbal (Andersen, 1989, 1991; Andersen & Shirai, 1994, 1996; Robison, 1990, 1995, entre outros).

Tem sido observado que o aspecto inerente dos verbos governa a aquisição da morfologia verbal e que os aprendizes adquirem distinções aspectuais antes de adquirirem distinções de tempo. Um experimento que envolveu a utilização de dois testes examinando dados tanto de produção como de identificação da morfologia verbal do inglês num corpus de 53 falantes nativos do português brasileiro e 27 falantes nativos do inglês foi desenvolvido com vistas a verificar tal hipótese.

Os resultados encontrados demonstram que a hipótese segundo a qual a utilização da morfologia verbal, em períodos iniciais da aquisição, é guiada pelas propriedades aspectuais dos verbos não foi confirmada no caso dos aprendizes investigados neste estudo.

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INTRODUCTION

In recent years, much research in Second Language Acquisition Theory has focused on the explanation for two well-attested phenomena in the acquisition process: **systematicity** across learners (i.e., learners from different L1 backgrounds appear to go through similar developmental stages in acquiring the L2), and **variability** demonstrated by learners both in terms of their intuitions about the language being learned as well as in its production. With respect to tense / aspect morphology[1], it has been observed, on the one hand, that learners' behavior concerning use of grammatical morphemes is inconstant, and that even rather advanced learners occasionally rely on the use of uninflected forms of verbs in target finite contexts. Mental grammars of L2 learners appear to permit more than one inflectional form in situations in which the target language allows only one structure. On the other hand, empirical research has also shown that learners present some degree of systematicity in the way the knowledge about the tense / aspect morphology of the target language grows. Various theoretical and empirical advances have convinced a growing number of scholars that the development of L2 mental grammars, a seemingly unorganized process, apparently follows distinct patterns.

[1] It has been widely accepted that the aspectual meaning of a given sentence involves a composite of both inherent lexical aspect and grammatical aspect and that languages may vary with respect to the interaction patterns they bear. Some languages present limited aspectual distribution, while others allow for all categories. Moreover, as we will see, lexical aspect and

Within the generative tradition, some of the explanations for learners' errors in the use of grammatical tense / aspect morphemes have concentrated on the investigation of the development of underlying grammar representation. In particular, the search for elucidation of the apparent unorganized learners' behavior with respect to morphological marking has involved analyses of whether or not the functional categories that host grammatical morphemes are projected from the early stages (e.g., Vainikka & Young-Scholten, 1994; Prévost & White, 1998). Alternatively, other researchers have proposed that the so-called 'variability' in Interlanguage morphological marking results from incomplete mapping of the target morphological paradigm rather than from deficit or absence of functional categories in early grammars. Among these are the Strong Continuity Hypothesis (e.g., Flynn & Martohardjono, 1994; Epstein, Flynn & Martohardjono, 1996; Klein & Martohardjono, 1999), and the Missing Inflection Hypothesis (e.g., Grondin & White, 1996). More specifically, Epstein et al. (1996) argue that a competence deficit claim (i.e., absence or non-projection of functional category nodes) does not provide a full explanation for the phenomena, as such a deficit should necessarily result in **no** production of target morphology (i.e., surface forms associated with the functional categories in question) rather than variability in learners' performance. Under this approach, the investigation of the causes for variability should necessarily involve the examination of the effects of non-syntactic factors, such as lexico-semantic information, pragmatic or processing factors.

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grammatical aspect are assumed to be independent components of the language and can co-exist in a sentence.

The non-generativist tradition has also contributed enormously with alternative explanations for learners' errors regarding inflectional tense / aspect marking. Comprehension and production of tense / aspect morphology have been surveyed among tutored and untutored learners of various target languages. Specifically, Andersen (1989; 1991), Andersen & Shirai (1994; 1996), Robison (1990; 1995a), Bardovi-Harlig (1999) among others, have argued that the development of inflectional morphology that encodes temporal meaning is guided by certain general cognitive principles, such as the Relevance Principle, the One-to-One Principle, the Congruence Principle[2], to name just a few. What is common to the studies under this approach is the conception that the principles mentioned above drive learners to assign form-meaning relationships based on aspect rather than tense at the early stages of acquisition. Thus, inappropriate use and incomplete knowledge of the L2 grammatical devices are believed to be nothing but a consequence of the role played by the verbal aspect at the early stages of language development. This is known as the **Primacy of Aspect Hypothesis** or the **Aspect Hypothesis**.

This particular approach to investigating the acquisition of tense / aspect morphological marking has yielded a lot of mixed results. On the one hand, cross-linguistic data has been used to propose that certain language **universals** guide aspect / tense acquisition (e.g., Robison, 1995a; Andersen & Shirai, 1996). That is, evidence from L1 and L2 learners has been taken to suggest that certain patterns in the emergence and development of both tense and grammatical aspect marking arise as a consequence of the mental

[2] See Chapter 2 for a comprehensive discussion of these principles.

connection made by learners between the target language morphology and the inherent lexical aspect of the verbs (Andersen & Shirai, 1994, 1996). On the other hand, methodological problems pointed out in the studies have raised doubts as to whether reliable conclusions can be drawn from them. Among these methodological issues are the types of procedures used for eliciting data (most studies have relied on free production only), the proficiency range of the learners tested (some studies have not tested for language proficiency at all), the size of the samples, and the difficulty in providing reliable verb classification tests based on aspectual features. The extent to which narrative structure and phonological environment play a role in the use of inflectional morphemes has also received some attention. However, the most robust body of research has focused on the examination of the specific predictions of the aspect hypothesis. Furthermore, although L1 transfer has been constantly mentioned as an influential factor in shaping Interlanguage tense / aspect behavior, not much research has actually focused on the investigation of that issue.

In line with certain recent trends in work on first and second language acquisition (see review in Chapter 2), the central goal of this essay is to investigate whether learners are initially influenced by the inherent semantic aspect of verbs in the acquisition of tense and aspect markers associated with these verbs[3]. More specifically, I will examine whether L2 English native-speakers of Brazilian Portuguese initially use tense / aspect inflectional

[3] Apart from the syntactic knowledge and the semantic distinctions present in the language, I believe that pragmatic conventions also play a role in the interpretation of sentences. Knowledge of a language, within the approach put forward here, also involves knowledge of the semantic and pragmatic values of the aspectual distinction in this language. Scope limitations,

morphology to encode the inherent aspect of the verb rather than tense, in accordance with the **aspect hypothesis**. In analyzing how learners employ inflectional morphemes, my purpose is to explore the extent to which observed patterns are indeed consistent with the view that language universals guide the acquisition process of tense / aspect morphology, as well as to investigate the extent to which these patterns show L1 influence.

Further, I will argue that, in order for us to make strong claims regarding the influence of inherent lexical aspect on the distribution of verb morphology in second language acquisition, the aspect hypothesis must be tested under highly controlled methods of data collection and analysis. It is also worth noting the uniqueness of this research project, as Brazilian Portuguese native-speakers learning ESL have never been tested for aspectual marking before. A further important characteristic of this investigation is that, unlike what happens in most aspect studies, controlled tasks testing both production and comprehension have been adopted. Different models of investigation – a Preference Task and an Elicited Production Task – are used in order to provide solid empirical ground for drawing conclusions.

The chapters in this study are structured as follows. In Chapter 1, I present a comprehensive review of the literature on verbal aspect, including the distinctions between tense, inherent lexical aspect and grammatical aspect. The four semantic categories proposed by Vendler (1957) (i.e., states, activities, accomplishments, and achievements), and a number of syntactic tests that

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preclude my dealing with pragmatic issues here. The reader is referred to Olsen (1996) for a discussion of verbal aspect involving pragmatic issues.

have been designed with a view to making the verb classification more precise will be introduced. In addition, the semantic features that compose the four aspectual categories – stativity, telicity, and durativity – will be characterized, followed by an analysis of three kinds of grammatical aspect found across languages – perfective, imperfective, and neutral. The chapter ends with a comparison of the main characteristics of the aspectual systems of the two languages involved in this investigation – Brazilian Portuguese and English. The overlap that exists between the tense/aspect forms and functions in the two languages investigated here is also discussed.

In Chapter 2, I will present the evidence that has been used both to support and to argue against the aspect hypothesis claims in both first and second language acquisition contexts. I will also consider the seductive intuitive appeal that characterizes the aspect predictions. I will show that most studies that are claimed to have given support to the hypothesis have relied on uncontrolled methods of data collection and analysis.

Chapter 3 introduces the research questions and hypotheses that have guided our investigation as well as detailed information about the test materials, participants, procedures for data collection and scoring the data.

Findings from the Preference Task and the Elicited Production Task will be reported and interpreted in Chapter 4. Each section is further organized on the basis of questions and research hypotheses detailed in the previous chapter. In addition, statistical analyses of the data are presented.

Finally, the findings of the study are summarized, the limitations of the research are acknowledged, and directions for future research are suggested in the conclusion. At last, pedagogical implications of the findings are also discussed.

1 ASPECT

1.1 Introduction

My goal in this chapter is to provide a thorough review of verbal aspect. First, details of the aspect *versus* tense distinction will be given. Second, the two main types of aspect – inherent lexical aspect and grammatical aspect – will be characterized. Third, a comprehensive review of inherent lexical aspect will be given. At this point, features of the four semantic categories proposed by Vendler (1957) (i.e., states, activities, accomplishments, and achievements) will be described, followed by the presentation of a number of syntactic tests that have been designed with a view to making the verb classification more precise. Fourth, the semantic features that compose the four aspectual categories – stativity, telicity, and durativity – will be characterized. Next, the three kinds of grammatical aspect found across languages – perfective, imperfective, and neutral – will be analyzed. Finally, a detailed comparison of the main characteristics of the aspectual systems of the two languages involved in this investigation – Brazilian Portuguese and English – will be supplied, including analyses of inherent lexical aspect, grammatical aspect, and semantic features.

1.2 Aspect *versus* tense

Both tense and aspect are notions that refer to the temporality of events, but from different perspectives. **Tense** is the grammatical category that relates the time of a given situation with some other time, a reference time, usually the time of speech. It locates events in a time line with respect to a deictic center: the situations described by the speaker may be anterior (past), simultaneous (present) or posterior to (future) a reference time. **Aspect**, on the other hand, is a non-deictic category that refers to a way of looking at the internal time of a situation. It marks the duration of a given event and/or its phases (cf. Andersen, 1989, 1991; Comrie, 1976; Dowty, 1979; Smith, 1983, 1991, 1997). According to Comrie, aspect characterizes "…different ways of viewing the internal temporal constitution of a situation" (1976:3). Dowty holds that

> 'aspect' markers serve to distinguish such things as whether the beginning, middle or end of an event is being referred to, whether the event is a single one or a repeated one, and whether the event is completed or possibly left incomplete. (1979:52)

For instance, the difference between sentences (1a) and (1b) is that of tense, whereas (2a) and (2b) show a difference in aspect.

(1) a. Peter *is sleeping*.
b. Peter *was sleeping*.

(2) a. Peter *slept.*
b. Peter *was sleeping.*

In the first group, 'is' and 'was' are used to contrast the difference between the two events in relation to a deictic center: present (or nonpast) and past. By contrast, the difference between the sentences in (2) has to do with the way the speaker views the internal structure of the event: in (2a) he/she refers to a situation viewed as a complete event, whereas in (2b) he/she views the situation as consisting of internal phases.

Another claim to the effect that the distinction between tense and aspect is needed is given by Lyons (1977), who claims that aspectual contrasts are more commonly found throughout the languages in the world than tense distinctions. As we see below, Olsen shares the same view.

> The separation of tense from aspect is supported by the fact that some languages encode one but not the other. In fact, surprisingly few languages lack aspectual distinctions, although many lack tense, including Classical Arabic and Mandarin (1996: 5).

1.3 Grammatical aspect *vs.* inherent lexical aspect

There are two types of aspect: **inherent lexical aspect** and **grammatical aspect**. The two are independent but interact in a language. **Grammatical aspect** (also called **viewpoint aspect** in Smith, 1983, 1991, 1997) involves semantic distinctions which are encoded through the use of explicit linguistic devices, such as verbal auxiliaries and inflectional morphemes (cf. Andersen, 1989, 1991; Comrie, 1976; and Smith 1991, 1997). The perfective/ non-perfective distinction in Portuguese and the progressive/ non-

progressive distinction in English are examples of grammatical aspect. By selecting one or the other, the speaker shows whether he is considering an event as complete or as an ongoing situation respectively.

Inherent lexical aspect (also called **situation type** by Smith, 1983, and **semantic aspect** by Comrie, 1976) refers to the inherent aspectual properties of verb stems and other lexical items employed by the speakers to describe a given situation. It is seen as independent of time reference and any morphological marking. For instance, *walk* is inherently **durative**, whereas *believe* is inherently **stative**[4]. In this essay, **aktionsart** (German for **type of action**) is assumed to be the same as lexical aspect (in accordance with Andersen, 1989, 1991; Olsen, 1996; and Smith, 1983, among others). It is important to make it clear, however, that this similarity is contested by some (Comrie (1976:6 ft.4) explains the reasons for such a disagreement).

Grammatical aspect is independent from inherent lexical aspect (Smith 1991, 1997). Consider, for instance, (3a) and (3b) below, in which the same grammatical aspect is being used to present distinct situations. The sentences differ in lexical aspect. Both types of lexical aspect (activity and accomplishments) can co-occur with the perfective because they characterize situations with clear endpoints. On the other hand, when (3b) and (3c) are compared, we see that they possess identical lexical aspect but differ in the way the situation is presented to the hearer; that is, even though the

[4] Definitions for the terms 'durative' and 'stative' will be provided below.

situation [build a house] is interpreted by the hearer as a telic event, therefore having a natural final point, the final point is not mentioned in the sentence.

(3) a. Peter *played* soccer.
Grammatical aspect = perfective
Lexical aspect = activity

b. Peter *built a house.*
Grammatical aspect = perfective
Lexical aspect = accomplishment

c. Peter *is building a house.*
Grammatical aspect = imperfective
Lexical aspect = accomplishment

It follows that even though the two kinds of aspectual information are related, they are allowed to co-exist independently in sentences in natural languages. In Section 1.4 below, I will analyze lexical aspect in more detail. Grammatical aspect will be discussed in Section 1.5.

1.4 Inherent lexical aspect

1.4.1 Vendler's fourfold schema

Based on the analysis of the aspectual phenomena in English, Vendler (1957) proposed four semantic categories: **states**, **activities**, **accomplishments** and **achievements**. His terminology will be adopted throughout this essay. The four categories are represented in Table 1 below.

Table 1: aspectual classes of verbs[5]

states	activities	accomplishments	achievements
have	walk	make a cake	find
desire	run	play chess	stop
love	study	draw a picture	open
believe	pull something	read a book	lose
know	play	run a marathon	bring
want	swim	build a house	start

Vendler's (1957) fourfold schema was further developed by Comrie (1976), Dowty (1979), Mourelatos (1981), and Smith (1991, 1997). Properties of each of these categories will be discussed below.

Prior to Vendler, Ryle (1949) had already suggested a verb classification based on aspectual features. It was Ryle who coined the terms 'achievement' and 'activities' to describe resultative and irresultative verbs respectively (p.149-151). Activity verbs such as *hunt*, *listen*, and *keep (a secret)* may last for an indefinite period of time, whereas achievements such as *die*, *lose (something)*, and *find (something)* are thought to happen at a particular moment. Ryle also distinguished "…purely lucky achievements" (Vendler's achievements: *find* and *recognize*) from "…achievements with an associated task" (Vendler's accomplishments: *paint a picture* and *build a house*). Kenny (1963:171-186) – based on the works of Aristotle – introduced a three-way classification: **states**, **activities** and **performances**, grouping accomplishments

[5] Most examples were taken from Vendler (1957:150).

and achievements together under the heading 'performance', for both categories describe actions that involve an outcome, a result (p.175). Kenny conceived an entailment test to distinguish activities from performance verbs:

(4) 'A is (now) ϕing' entails 'A has ϕed' if ϕ is an activity verb

'A is (now) ϕing' entails 'A has not yet ϕed' if ϕ is a performance verb

For instance, if a man is swimming, we can say that he has swum, for *swim* is an activity verb. On the other hand, if we say that a man is making a chair, we are implying that he has not yet made a chair; all we are saying is that he is in the process of doing so. Another of Kenny's contributions was to make more precise the distinction between states, on the one hand, and activities and performances on the other. While the two latter categories can occur in the progressive tenses, stative verbs are not normally found in these tenses in English. For example, we can say that a man is driving a car or that a boy is drawing a picture, but saying that certain students are 'knowing' the answer to a question does not sound like proper English at all[6].

Three basic clusters of values for lexical aspect features are assumed to account for all verbs across languages. These semantic distinctions are **stativity** *vs.* **dynamicity**, **telicity** *vs.* **atelicity**, and **punctuality** *vs.* **durativity** (Comrie, 1976; and Smith, 1991, 1997). Further details of these universal aspect features will be discussed in Section 1.4.2 below.

[6] For a more detailed analysis of Ryle (1949) and Kenny's (1963) contributions, see Dowty (1979:52-55) and Mourelatos (1981:192-194).

In order to provide a classification of verbs according to their inherent lexical value, several kinds of tests based on a variety of syntactic properties of predicates have been designed. The most complete list of tests was developed by Dowty (1979). Smith (1991, 1997) also presents some. In what follows, some of the classification tests will be discussed in order to provide a more detailed description of each verb category. A comparison between situations in Brazilian Portuguese and in English will be made under 1.6 below.

1.4.1.1 States

Stative verbs describe events that cannot be classified as actions, in the sense that they do not have internal dynamics. They have indefinite duration and no clear endpoint. The use of a stative verb in a sentence implies that no change has occurred for the state to obtain. As Smith (1991, 1997) puts it, some kind of an external agent is necessary for a change into or out of a state to take place (e.g. *own a car*, *believe in God*, *be bald*). Mourelatos (1981) claims that "…though it may provide the potential of change, the state itself does not constitute a change" (p.192). For that reason, it has been said that states hold effortlessly, i.e., no energy input needs to be applied for it to hold.

According to Vendler, in addition to all **qualities** (*be married*, *be healthy* or *ill*, *be hard* or *hot*) and the "so-called 'immanent operations' of traditional philosophy" (1957:150) such as *desire*, *know* and *love*, the class of stative predicates also includes **habits** (occupations, abilities, dispositions).

That explains why a person can say that she teaches Chemistry at a public school even while jogging in the park.

Stative predicates are characterized by internal homogeneity (the same way activities are). Any internal part of a state is of the same nature as any other part and as the whole event. Vendler (1957) provides us with the following example to illustrate this definition: " 'A loved somebody from t_1 to t_2' means that, any instant between t_1 and t_2, A loved that person" (p.149). Such a property of states can also be tested by its compatibility with the time adverb for:

(5) a. Martha *loved* Paul for ten years.
b. Fred *owned* a Mercedes for 5 years.

In (5a), the only reasonable interpretation is the one in which we think of Martha as someone who uninterruptedly loved Paul during the ten-year period. Similarly, when we utter (5b), we are implying that the state of Fred's owning the car was of the same kind during the five-year time span. That is, there was no variation in the state obtained during the period we are referring to, and we conceive of no moment in which Fred did not own the Mercedes or in which he owned it in a different way[7].

The most controversial test for stative predicates was first presented by Kenny (1963), who observed that this class of verbs does not normally occur in progressive tenses in English. For instance, 'Bill *is learning* French' (an

[7] In a similar manner, Smith introduces the following "entailment pattern for states: When a state holds for an interval it holds for every sub-interval of that interval" (1997:32).

activity sentence) is assumed to be a proper English sentence – as well as 'Bill *is drawing* a picture', which is assumed to be an accomplishment sentence – whereas 'Bill *is knowing* French' is considered ungrammatical in standard speech[8].

Comrie (1976), however, has a different interpretation of such a phenomenon. According to him, "there are many verbs that are treated sometimes as stative, sometimes as non-stative, depending on the particular meaning they have in the given sentence" (1976: 36). He presents the sentence under (5) below as an example of a non-stative use of a stative verb in English:

(6) *I'm understanding more about quantum mechanics as each day goes by*.

Comrie argues that in spite of being normally used as a stative verb, *understand* in this case refers to "a change in the degree of understanding", i.e. "a developing process, whose individual phases are essentially different from one another" (1976:36-37). Mourelatos (1981) goes even further and claims that this sort of **semantic multivalence** of stative verbs, that is, the fact that they can function in stative, activity, or performance contexts "is, in fact, the rule rather than the exception" (p.196, ft.14).

Apart from the progressive test, Dowty (1979: 55, 56) discusses a few other usual tests that compare the behavior of stative and non-stative verbs known in the literature. In the examples that follow, sentences including the stative verb *know* are compared to sentences that include *swim* and *draw a*

[8] For other examples, see Dowty (1979:55).

picture which are believed to be an activity and an accomplishment verb respectively.

- Only non-stative verbs are allowed as complements of *force* and *persuade*:

(7) a. *Bill forced Paul to *know* French.
b. Bill persuaded Paul to *swim*.
c. Bill persuaded Paul to *draw* a picture.

- Only non-stative verbs are used in imperative contexts:

(8) a. **Know* French!
b. *Swim*!
c. *Draw* a picture!

- Only non-stative verbs appear in combination with adverbs that describe voluntary actions such as deliberately, carefully:

(9) a. *Bill deliberately *knew* French.
b. Bill *swam* carefully.
c. Bill carefully *drew* a picture.

- Only non-stative verbs are used in pseudo-cleft constructions:

(10) a. *What Paul did was *know* French.
b. What Paul did was *swim*.
c. What Paul did was *draw* a picture.

- In contrast to stative verbs, activities or accomplishments that appear in any non-progressive tense normally have a habitual interpretation. Sentences (11b) and (11c) are understood as involving more than one occasion of 'swimming' or

'delivering a sermon' respectively. In the case of statives (11a), however, the interpretation of Bill's knowing French more than once is not possible.

(11) a. Bill *knows* French.
b. Bill *swims*.
c. Bill *delivers* a sermon.

Another characteristic of stative predicates is pointed out by Smith (1991, 1997), who argues that even though statives can co-occur with adverbs of simple duration and momentary adverbs (12a and 12b respectively), they do not appear in combination with adverbs of indirect duration (12c). According to her, "statives are ungrammatical with adverbs of indirect duration because such adverbs imply activity" (1997: 47).

(12) a. She *hated* the class from beginning to end.
b. My brother *believed* in Santa Claus at the age of five.
c. * My brother slowly *believed* in Santa Claus.

The main criticism that can be raised against the use of such tests as reliable criteria for the construction of some sort of a verb classification concerns their lack of accuracy: counterexamples are relatively easy to find and the definitions involved are vague and imprecise. Recall, for instance, the idea of **semantic multivalence** of stative verbs put forward by Mourelatos (1981) which was presented above. Smith (1991, 1997) dscusses similar cases, which she names **situation type shifts**: sentences may present states as events and/or events as states. In her view, such sentences "represent aspectual choices which give a marked focus to a situation" (p.51). In the examples in (13)

below, situations which are usually seen as statives, are being associated with – and focusing on – dynamicity, an intrinsic feature of activities and accomplishments (Smith, 1997: 52).

(13) a. I am *hating* zoology class.
b. She *was thinking* that she wanted to go home.
c. The river *is smelling* particularly bad these days[9].

Smith also claims that speakers may decide to present activity and accomplishment situations as states. In that case, they will be emphasizing the continuity or homogeneity of the internal stages of an event, as shown in the examples below (taken from Smith, 1997: 52), in which a nominal variant of the activity/accomplishment verb is combined with the copula *be*.

(14) a. The ship *was* in motion.
b. We *are* in the process of building a snowman.

Apart from that, there is also disagreement among scholars with respect to whether some sort of a verb classification based on syntactic tests can be considered universal cross-linguistically. I will come back to this point in Section 1.6 below.

[9] It is important to note that, in Smith's view, conversational implicatures (Grice, 1975) are responsible for the progressive interpretations of the sentences given above.

1.4.1.2 Activities

Activity predicates describe processes that involve some kind of mental or physical activity. Events such as *walk in the park, swim, read the paper,* and *ride a bike* occur over indefinite periods of time. Unlike stative events, they are dynamic and require some kind of energy input in order to keep going.

Activities are also viewed as events that take time; that is, they last for a while. There is no arbitrary definition of the minimum amount of time an activity event is supposed to last. Intuitively, however, we do not say 'John *is swimming*' or even 'John *swam* yesterday' if he "swims" (or better, moves his arms!) for, let us say, five seconds.

As it has been seen in the case of stative predicates, activity verbs also describe homogeneous events (Vendler, 1957). In other words, any particular part of the process is similar to any other part and to the whole event. For instance, if John is swimming for a certain period of time, his movements during that period are seen as composing the action of swimming, that is, his moving of the left arm, then the right arm, and so on, all count as internal parts of a larger event called 'swimming'.

Typically, activities are atelic events; i.e. they have no notion of completion, but an arbitrary final point. Smith (1991, 1997) refers to this class of verbs as having "…no goal, culmination or natural final point: their termination is

merely the cessation of activity. (…) Activities *terminate* or *stop*, but they do not *finish*" (1997: 23).

The most important syntactic tests presented by Dowty (1979) to distinguish activity from accomplishment predicates are:

- Activity predicates can be combined with for-expressions, but do not co-occur with in-expressions (examples 15a and b). Conversely, accomplishments (examples 16a and b) accept in-phrases but are not normally used in combination with for-phrases.

(15) a. Kim *sang* for an hour.
b. * Kim *sang* in an hour.

(16) a. ? Tom *drew* a picture for an hour.
b. Tom *drew* a picture in an hour.

- The entailment patterns of activity predicates used in the simple past tense differ from those of accomplishment verbs (Dowty, 1979: 57).

(17) If ϕ is an activity verb, then *x ƒed for y time* entails that at any time during *y*, *x ƒed* was true. If ϕ is an accomplishment verb, then *x ƒed for y time* does not entail that *x ƒed* was true during any time within *y* at all.

This difference is due to the already mentioned fact that activities describe homogeneous events, whereas accomplishments do not. Consider, for instance, the examples discussed under (15) and (16) above. If Kim sang for an hour, then it is the case that at any moment during that period of time it is true

that she sang. However, if Tom drew a picture for an hour, then it is not the case that at any time during that hour, he drew a picture.

- Following Kenny (1963), Dowty asserts that the entailment patterns that result from the progressive tenses is also distinct for activities and accomplishments.

(18) If ϕ is an activity verb, then *x is (now) f ing* entails that *x has f ed*. If ϕ is an accomplishment verb, then *x is (now) f ing* entails that *x has not (yet) f ed*.

To illustrate, from 'Kim *is* now *singing*', it is reasonable to infer that she has already sung, but from 'Tom *is drawing* a picture now', one can only infer that he has not drawn a picture yet.

- When activities and accomplishments appear as complements of stop, the entailment patterns also differ.

(19) a. Kim stopped *singing*.
b. Tom stopped *drawing* a picture.

While from (19a) we are entitled to conclude that Kim did sing, from (19b) we can only conclude that he was drawing a picture at some point in the past (which he may or may not have finished). In the latter case, we are not entitled to conclude that Tom did draw a picture.

- Accomplishment verbs normally appear as complements of finish, whereas activities do not.

(20) a. * Kim finished *singing*.
b. Tom finished *drawing* a picture.

- The use of the adverb almost also has different consequences for the two kinds of verbs. From (21a) we conclude that Kim did not, actually, sing. Sentence (21b), however, allows two distinct interpretations: (a) prior to starting drawing a picture, Tom changed his mind and did nothing at all (similar interpretation to the activity verb), or (b) he did, in fact, do some work on the picture but it is not a complete picture yet.

(21) a. Kim almost *sang*.
b. Tom almost *drew* a picture.

The applicability of these tests to distinguish activity from accomplishment predicates in BP compared to the behavior of such verbs in English will be discussed under Section 1.6.1.2 below.

1.4.1.3 Accomplishments and achievements

One of the main reasons that led scholars to argue that accomplishment and achievement predicates constitute one single category (the so-called 'performance verbs' for Kenny, 1963) is that they are both telic. Telic verbs describe events that have a natural endpoint, a culmination point, which represents the completion of the process. Accomplishment and achievement situations result in a change of state, a new state (for example, *drink a glass of wine*, *make a cake*, *recognize someone*, *reach the top*).

McClure (1995, 1998) uses the term 'change of state events' to group these two categories of predicates together.

The distinction between accomplishments and achievements was first noted by Vendler (1957).

> When I say that it took me an hour to write a letter (which is an accomplishment), I imply that the writing of that letter went on during that hour. This is not the case with achievements. Even if one says that it took him three hours to reach the summit, one does not mean that the 'reaching' of the summit went on during those hours. Obviously it took three hours of climbing to reach the top. Put in another way: if I write a letter in an hour, then I can say, "I am writing a letter" at any time during that hour; but if it takes three hours to reach the top, I cannot say, "I am reaching the top" at any moment of that period. (p. 147-148)

Vendler's words direct us to see that there is an important difference between these two types of verbs. While accomplishments have intrinsic duration and are processes composed of successive stages, achievements are instantaneous events. In addition to that, it is a property of accomplishments that we can say 'X V-ed' referring to a complete time frame, and not to a single moment within that time frame, which is true for achievements. Thus we say 'Harry *built* a bridge' referring to the whole event, whereas 'Harry *won* the race' refers to the culmination point of the racing event.

Vendler (1957: 145) also introduced the accomplishment category in order to draw a distinction between situations which are unbounded – activities (example (22a)) and situations which present an event as completed, with a natural final point – accomplishments (example (22b)). According to this

distinction, when uttering (22a), the speaker is not making any statement as to how long the action will take place; that is, the action has no pre-determined endpoint. In case the speaker utters (22b), however, he/she is assuming that the event of walking will take place within a limited time frame and the sentence will be considered true only if John does not stop walking before the action of getting to school is reached.

(22) a. John *is walking*.
b. John *is walking* to school.

Moreover, if John stops walking at certain point, it will still be true that John has walked, because he, in fact, did walk. The same reasoning cannot be applied to accomplishments, though. If John stops walking to school, he did not walk to school.

Another reasoning follows from Vendler's analysis. As we have seen in Section 1.4.1.2, if 'John *is walking* for 60 minutes' is true, then it is true that he has been walking during every minute within that period, for activities are homogeneous events. Nonetheless, 'John *is walking* to school in 15 minutes' does not entail that he walks to school during every minute of those 15 minutes.

As Smith (1991, 1997) points out, it has been assumed that the accomplishment event involves all the particular internal stages as well as its completion. For instance, when we say 'Peter *built* a house last year', we are referring to all various stages Peter went through in order to build the house and that also includes the last stage, that is, its completion.

Therefore, unlike states and activities, accomplishment verbs do not describe homogeneous events. The successive internal stages of an accomplishment event are distinct from each other. Its endpoint also differs essentially from the preceding stages, because the expected outcome of an accomplishment is a different state, a new state. Besides, when the final point of an accomplishment is reached, the event is over and complete. That is, once we say 'Peter *built* a house', we cannot conceive of Peter continuing building "the same" house, because the process is assumed to be completed, finished[10].

Smith calls our attention to another fact regarding accomplishments, which she names the **entailment relation** between process and outcome[11].

> If the outcome of an accomplishment is reached, it follows that the process occurred. However, the opposite is not true: if a process occurs one cannot infer its outcome. (…) This entailment can sometimes be stated with truth conditions for related perfective and imperfective sentences with telic constellations. (…) If an accomplishment sentence with the perfective viewpoint is true at interval I, then the same verb constellation with the progressive viewpoint is true at that interval (1991: 50).

The following examples illustrate Smith's point. In any situation in which (23a) is true, (23b) is also true. However, the opposite entailment does not hold, i.e., even if it is true that Peter was in the process of writing a book last month, this fact alone does not entail that he has finished writing the book.

(23) a. Peter *wrote* a book last month.

b. Peter *was writing* a book last month.

[10] He may be building a new, different house, though.

In the case of achievements, however, the implications are different.

> The entailment pattern of achievement shows that their change of state is conceptualized as an event that is distinct from an associated process. (…) Achievements do not entail the existence of an associated preliminary process, or vice versa. (…) There is no relationship of entailment between perfective and imperfective sentences of the achievement situation type. (Smith 1991: 60)

Hence, because there is no entailment relationship between achievements and processes, (24a) may be true even if it is the case that Andy has always been healthy and nobody could expect from his past history that he was terribly sick. It may be true also in a situation in which it is not the case that (24b) is true. We could assume, for instance, that he has unexpectedly recovered from his illness.

(24) a. Andy *was dying.*
b. Andy *died.*

Dowty (1979: 59) presents the following entailment patterns to illustrate such a distinction:

(25) a. If ϕ is an accomplishment verb, then *x fed in y time* entails *x was fing during y time*.
b. If ϕ is an achievement verb, then *x fed in y time* does not entail *x was fing during y time*.

In other words, from the truth of 'Peter *wrote* a book last month', we can conclude that 'Peter *was writing* a book last month' is also true. However, if

[11] See also Dowty (1979: 59).

'Mark *found* a penny in a few minutes' is true, it does not follow that Mark *was finding* a penny throughout the period of a few minutes.

Achievement verbs also result in a change of state, but, contrary to accomplishments, they involve the beginning or the climax of an event instead of presenting the whole situation. Achievements are instantaneous, punctual and therefore the preliminary stages that may precede the process presented by the achievement verb are conceived independently; that is, they are not part of the achievement event itself.

Being instantaneous events, achievements are incompatible with verbs and adverbials expressing completion (see examples in (26) below). For that reason, in languages like Chinese, the imperfective aspect is not possible with this kind of verb, whereas the perfective aspect is considered normal in all languages. In the case of English and Portuguese, the imperfective aspect is allowed when the speaker is concentrating on preliminary stages of the achievement situation (Smith, 1991: 63): 'They *were starting* the game', 'Gary *was opening* the door', etc.

(26) a. He *finished* dying.

b. We *started* the game <u>for</u> five minutes.

A further property of accomplishments that is pointed out by Dowty (1979: 60-65) and also by Smith (1991: 51) is the requirement that countable arguments be used to complement these verbs. In fact, Dowty presents this fact as posing a serious problem for Vendler's classification. He says:

> I have not been able to find a single activity verb which cannot have an accomplishment sense in at least some special context. (…) Accomplishment verbs which take direct objects unexpectedly behave like activities if an indefinite plural direct object of a mass noun direct object is substituted for the definite (or indefinite singular) one. (p. 61-62)

Such a fact can be verified through the following example sentences.

(27) a. Henry *has written* letters.

b. Henry *has written* a letter / 6 letters.

As we can see, for the sentence to be considered as describing an accomplishment event, a direct object needs to be included. It is only in such cases (for instance, 27b) that we will be referring to a specific situation, i.e. to a completed situation. The most natural interpretation of (27a) is the one in which we think of Henry as someone who has written several letters in the past and may carry on with that job indefinitely. We are not talking about a particular event in his life. In fact, telicity is one of the main properties that distinguish accomplishment events from activities, for, as we have seen above, they both describe durative and dynamic situations.

A few other ways to test for the distinction between accomplishments and achievements are found in the literature (summarized by Dowty, 1979: 58-59):

- In contrast to activities, which only take adverbial prepositional phrases with for (see sentences in (28)), accomplishments accept both for and in-phrases and achievements only allow in-adverbials (see sentences in (29) and (30)).

(28) a. Leo *drove* for an hour.

b. ? Leo *drove* in an hour.

(29) a. Fred *wrote* a letter in an hour.

b. Fred *wrote* a letter for an hour.

(30) a. Ed *found* his key in an hour.

b. ? Ed *found* his key for an hour.

- Achievement verbs are usually not found in combination with finish, whereas accomplishments are.

(31) a. * Mark finished *finding* a penny.

b. Fred finished *writing* a letter.

- Unlike both activities and accomplishments, achievements do not occur as complements of stop.

(32) a. * Mark stopped *finding* a penny.

b. Fred stopped *writing* a letter.

c. Kim stopped *singing*.

- Similarly to what happens in the case of activity situations, the ambiguity found with the use of the adverb almost in accomplishment predicates is not found in achievement sentences. Compare (32a) to examples (21a) and (21b) discussed above (repeated below). From (32a), all we can conclude is that Mark did not find a penny.

(32) a. Mark almost *found* a penny.

(21) a. Kim almost *sang*.

b. Tom almost *drew* a picture.

- The same way as stative predicates, achievements do not occur in combination with adverbs like deliberately, attentively, carefully, obediently, which describe voluntary actions.

(33) a. * Mark deliberately *found* a penny.
attentively
carefully
obediently

Table 2 below (from Dowty, 1979: 60) summarizes the criteria used to distinguish properties of the four aspectual classes of verbs discussed so far.

Table 2: properties of the four aspectual classes

Criterion	States	Activities	Accomplishments	Achievements
1. meets non-stative tests	no	yes	yes	?
2. has habitual interpretation in simple present tense	no	yes	yes	yes
3. *ƒ for an hour, spend an hour ƒing*:	OK	OK	OK	bad
4. *ƒ in an hour, take an hour to ƒ*:	bad	bad	OK	OK
5. *ƒ for an hour* entails *ƒ at all times in the hour*:	yes	yes	no	d.n.a.
6. *x is ƒing* entails *x has ƒed*:	d.n.a.	yes	no	d.n.a.
7. complement of *stop*:	OK	OK	OK	bad
8. complement of *finish*:	bad	bad	OK	bad
9. ambiguity with *almost*:	no	no	yes	no
10. *x ƒed in an hour* entails *x was ƒing during that hour*:	d.n.a.	d.n.a.	yes	no
11. occurs with *studiously, attentively, carefully,* etc.	bad	OK	OK	bad

OK = the sentence is grammatical, semantically normal

bad = the sentence is ungrammatical, semantically anomalous

d.n.a. = the test does not apply to verbs in this class.

1.4.2 Universal aspectual values

For the most part, it has been assumed that the lexical aspectual categories discussed in the preceding section (plus the Semelfactive class proposed by Smith, 1991, 1997) can account for all states and events found in human languages. Furthermore, as we have seen, each category is characterized by some essential properties and is associated with a particular situation type. In brief, states present no internal dynamics or stages, have indefinite duration and no clear endpoint, e.g. [*know the answer*]. Activities describe atelic, dynamic and homogeneous processes that occur over an indefinite period of time, e.g. [*play chess*]. Accomplishments describe events with intrinsic duration and successive stages; they are atelic and dynamic, e.g. [*write a letter*]. Finally, achievements are punctual, instantaneous, dynamic and telic, e.g. [*open the door*].

These aspectual categories are each distinguished by clusters of semantic features forming 3 contrasting pairs: [+/- **stativity**] (or [+/- dynamicity]), [+/-**telicity**], and [+/-**durativity**] (or [+/- punctuality]) (Comrie, 1976; and Smith, 1991, 1997)[12]. Thus, states are [+durative], [-telic], and [+stative] (or [-dynamic]); activities are [-stative], [-telic], and [+durative]; accomplishments are [-stative], [+telic], and [+duratives]; and achievements are [+telic],

[12] Olsen's view differs slightly from Smith's with respect to this point. She argues that these features represent privative (rather than equipollent) semantic oppositions, in which only the positive member of each pair is marked. Due to scope reasons, however, we will not give further details here. The reader is referred to Olsen (1996: 27-31).

[-duratives], and [-stative]. Table 3 below, adapted from Andersen (1991: 311), presents a classification according to these features[13].

Table 3: semantic features

	STATES	PROCESSES (activities)	DEVELOPMENTS (accomplishments)	PUNCTUAL OCCURRENCES (achievements)
Durative	+	+	+	--
Telic	--	--	+	+
Stative	+	--	--	--

1.4.2.1 Durativity

Durativity is the semantic feature that expresses the presence or absence of internal intervals in a situation type. States, activities, and accomplishments are said to denote durative situations, that is, situations that last for a certain period of time, whereas achievement verbs refer to punctual situations, i.e. situations that take place instantaneously and as a consequence present no internal structure.

Smith (1991, 1997) calls our attention to the fact that durativity is not considered an essential property of situation types by some scholars (for instance, Mourelatos 1981). The reason why this is so is that the notion of a punctual situation is hard to define. When we analyze an instantaneous event, even the shortest event one can possibly encounter, such as *cough*, or *reach*

[13] Smith (1997) provides us with a similar classification, to which she adds the Semelfactive class.

the summit, we realize that all events can conceivable be timed and last for a few milliseconds. Thus, from this perspective, punctual events could not possibly exist. Nonetheless, she claims, because duration is either overtly or covertly grammaticalized in many languages, it sounds reasonable to analyze it as a linguistic category. Comrie (1976) also supports a similar view and argues that

> a number of languages do recognise a class of verbs that under normal circumstances can only refer to punctual situations (or iteration of punctual acts), suggesting that punctuality is a valid linguistic category, notwithstanding the apparent difficulties caused by recent technology (in particular, slowing down of films) in distinguishing the precise range of punctual situations (p. 43-44).

1.4.2.2 Telicity

The telic / atelic distinction is not clear-cut, and it may sometimes be hard to describe sentences as being unambiguously telic or atelic. Under such circumstances, I will focus on the semantic distinction that characterizes each one of the two kinds of events. Let us analyze the situations denoted by the following contrasting sentences:

(34) a. Jane *is singing*.
b. Jane *is singing a song*.

Both events described in (34) are understood as durative in the sense that they supposedly last for a while. Nevertheless, the situations they describe are

intrinsically different. In (34b), there will necessarily be a climax, i.e. a point at which the act of *singing a song* comes to a natural end. Conversely, in (34a), the act of *singing* does not have a natural final point: Jane can go on singing indefinitely, or she may stop singing at some point, which will be arbitrarily set by herself or by some other person or fact. Even though it might be true that her singing shall eventually come to an end, the fact of the matter is that such an event (her stopping singing) is not entailed by the sentence itself, as it is the case in (34b). When a verb refers to a situation with an inherent endpoint or goal, like the one described by (34b), we say that it is **telic** or that it contains the [+telic] feature. In contrast, situations similar to (34a) are said to be **atelic** or to present the [-telic] feature[14]. Due to the fact that telic events present an intrinsic goal and necessarily come to an end, they are conceived of as being finite. Besides, when the inherent goal of a telic situation is achieved, the event is completed, causing a change of state.

On the basis of the definition presented above, it has been assumed that accomplishment and achievement verbs are telic, whereas activities are atelic. The following examples show that the telic nature of an event can be tested when combined with the perfective / imperfective distinction (cf. Comrie, 1976), which will be discussed in detail in Section 1.5 below. A verb is atelic if the situation it denotes can be described in either a sentence in the imperfective or in the perfective. In other words, the imperfective form of an atelic verb is said to entail its corresponding perfective form. Thus, because (35a) entails

[14] Olsen presents a different analysis of this feature. According to her, verbs like the one used in (34a) are not called 'atelic', even though she assumes that they do not present the [+ telic] feature (1996).

(35b), the verb *swim* is considered atelic. Conversely, as (36a) does not entail (36b), *build* is considered a telic verb: the perfective form of a situation described by a telic verb implies the attainment of the endpoint of that event, that is, it implies that the event has been completed.

(35) a. John *is swimming* in the pool.

b. John *has swum* in the pool.

(36) a. John *is building* a swimming pool.

b. John *has built* a swimming pool.

1.4.2.3 Stativity

For the most part, the stativity *versus* dynamicity opposition is a very intuitive one. According to Smith (1991, 1997), it divides situation types into two classes of phenomena: states and events. Thus, states are static in the sense that they are homogeneous, whereas events consist of distinct stages involving dynamicity and change. In order to illustrate this distinction, let us look at the durative verbs *know* and *walk* in the following sentences.

(37) a. Harry *knows* how to drive a truck.

b. Barbara *is walking* the dog.

The difference between the situations denoted by these two verbs is clearly seen when we consider their internal characterization. Sentence (37a) denotes an event in which all its internal stages are identical. That is, when we

hear (37a), we unconsciously expect Harry's knowledge to remain the same, regardless of the specific moment in time at which the speaker decides to talk about it. By contrast, (37b) presents a different situation. The event referred to by 'Barbara *is walking* the dog' consists of distinct internal phases. We can imagine that, for instance, while walking her dog, Barbara meets a friend and starts chatting with him, a situation in which we would still say that she's walking the dog even if she has actually stopped walking for a little while! Thus, *walk the dog*, a dynamic situation, involves automatic change within distinct internal stages, whereas *know*, a state verb, involves no change at all.

Comrie (1976: 49) and Olsen (1996: 38), however, call our attention to the fact that state verbs may also have a dynamic interpretation in some cases. For instance, the verb *stand* receives a canonical stative interpretation in 'My bookshelf *stands* against the wall', but naturally has a dynamic interpretation in 'My cooking book *stands* on the bookshelf' because it may stand there in various positions. *Stand* belongs to a larger class of verbs alongside with *lie* and *sit*, that Dowty (1979: 184) names **internal statives**. Based on these facts, Olsen (1996) then concludes that

> states, therefore, have both stative and dynamic interpretations. In contrast, [+dynamic] verbs are always interpreted as dynamic, independent of stative constituents or pragmatic contexts. (p. 38)

Based on these claims, a more precise characterization of the stative property is necessary. Dynamic situations are therefore identified with change, whereas statives are homogeneous and hold automatically. In other words,

unless there is some kind of input of energy that forces a state to change, it will hold indefinitely. In the case of dynamic situations, in opposition, changes not only are necessary but obligatory. That is, in order for a dynamic situation to continue, some energy effort must be constantly applied to it (either agentive or non-agentive, as Comrie (1976: 50) puts it).

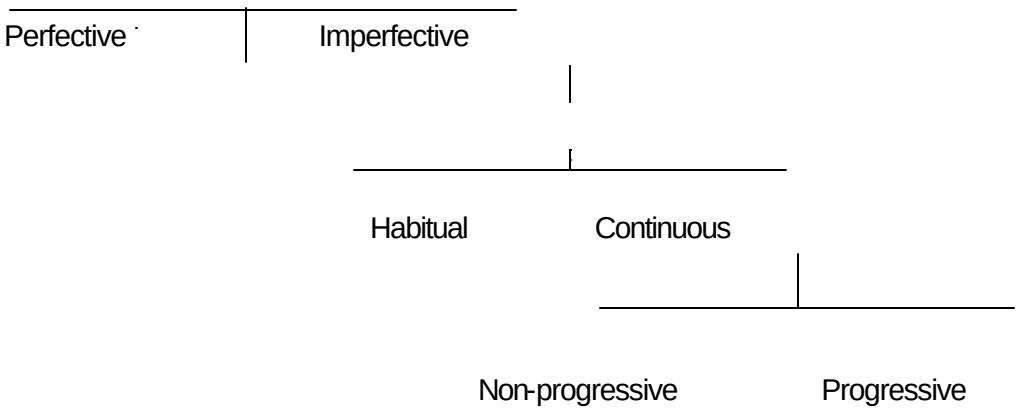
1.5 Grammatical aspect

According to Comrie, the notion of grammatical aspect is related to the "…different ways of viewing the internal temporal constituency of a situation" (1976: 3). It is usually expressed by a grammatical morpheme attached to the main verb or to the auxiliary verb associated with the main verb in the sentence (the so-called 'periphrases'). The main distinction between the various kinds of grammatical aspect refers to how much of a situation they make visible. In his words, "…perfective looks at the situation from outside without necessarily distinguishing any of the internal structure of the situation, whereas the imperfective looks at the situation from inside, and as such is crucially concerned with the internal structure of the situation" (Comrie, 1976: 4).

Several classifications of grammatical aspect have been proposed in the literature. To start with, I will introduce Comrie's proposal. He classifies grammatical aspect into two broad categories: **perfective** and **imperfective**. He further divides imperfective aspect to include other kinds of aspectual

distinctions that are sometimes present in the languages: habitual and progressive aspects (1976: 25). His classification is shown in Table 4 below.

Table 4: Comrie's classification of aspectual oppositions



According to Comrie, the types of aspectual distinctions present in different languages might vary. He further claims that sentences may have more than one aspectual interpretation and that the categories are independent. This framework accounts for the fact that the sentence 'Fred *studied* here', for instance, may be interpreted in a habitual reading (as in 'Fred *used to study* here') or from a perfective point-of-view (as in 'Fred *studied* here from 1994 to 1996'). Comrie also assumes that English contains two aspectual oppositions: progressive (*be* + V-*ing*) X non-progressive (both associated with imperfective) along with perfective (*have* + Past Participle) X non-perfective.

Comrie's idea that languages present different kinds of semantic distinctions is supported by an analysis of the Portuguese and Spanish Past tense. In these two languages, the Past tense can be expressed in two distinct

ways, as the Portuguese sentences under (38a) and (38b) below will show. In addition to that, Portuguese (as well as Spanish) also has a separate progressive form, given under (38c). Example (38a) is in the 'Pretérito Perfeito', (38b) is in the 'Pretérito Imperfeito', and (38c) is a periphrasis formed by the auxiliary *estar* plus the gerund form of the main verb.

(38) a. Pedro *jogou* futebol.
'Peter played^{Perf} soccer'

b. Pedro *jogava* futebol.
'Peter played^{Imperf} soccer'

c. Pedro *estava jogando* futebol.
'Peter was playing soccer'

It is worth noting that these sentences have different interpretations. While (38a) is normally used to denote a particular situation in which Pedro played soccer – somewhat similar to the use of the Simple Past tense in English, in (38b) the speaker implies that Pedro used to play soccer – a habitual situation – and no longer plays it. Sentence (38c) has a progressive interpretation.

Smith (1991, 1997) states that grammatical aspect is present in all sentences in a language. According to her view, there are three kinds of grammatical aspect (in her words 'viewpoint aspect'): **perfective**, **imperfective**, and **neutral aspect** (aspectually vague sentences).

Contrary to Smith, Olsen (1996) defends that not all sentences (consequently, not all verbs) are required to have grammatical aspect. Her

approach follows the tradition of positing two universal features to represent grammatical aspect, namely [+imperfective] and [+perfective], but her view of grammatical aspect as a set of universal features not always present in languages is distinct from Smith's (1991, 1997). First, Smith conceives both lexical ("situation") and grammatical ("viewpoint") aspect as being part of Universal Grammar, therefore innate. In addition to that, Smith contends that aspect is universal in the sense that every sentence of every language has both lexical and grammatical aspect. In Olsen's model, in opposition, while lexical aspect is supposed to be universal, grammatical aspect is seen as optionally present in languages. Furthermore, instead of positing the existence of a third aspectual category (Smith's neutral aspect), Olsen contends that some linguistic forms may be **unmarked** for grammatical aspect in languages. In that case, she predicts that unmarked forms are interpreted "…based on the inventory of marked forms and the pragmatic context" (1996: 13).

Even though Smith (1991, 1997) adds one more category to Comrie's classification, the neutral aspect, her definitions of perfective and imperfective aspect follow Comrie's early distinction. Thus, according to Smith's view, the **perfective** aspect treats a situation as a complete, self-contained whole, whereas the **imperfective** aspect is employed to make explicit reference to the internal temporal structure of a situation, as if viewing the situation from inside. As we have already seen, because she proposes that all sentences have grammatical aspect, Smith conceives a third category, the so-called **neutral** aspect, which is supposed to account for those sentences in the languages that do not contain an explicit inflectional morpheme. Such

'aspectually vague sentences', as she calls them, allow for either closed or open interpretations[15].

1.5.1 Perfective aspect

Smith (1991, 1997) claims that the basic property of unmarked perfective aspect is to present a situation as a single, self-contained whole. The main property of the perfective aspect is that it is incompatible with any interpretation in which the internal phases of a particular event are taken into account. Perfectives are said to be **closed** informationally, that is, a perfective sentence normally presents both the initial and final points of a given situation[16].

Apart from describing the occurrence of an event as a completed whole, the speaker may choose to employ the perfective aspect in order to emphasize the description of the termination/completion of a particular event as well. In the case of a telic event (39a), the perfective aspect will convey the existence of a natural final-point, whereas in the case of an atelic event (39b), it will convey the existence of an arbitrary final-point.

(39) a. Jane *swam* in the lake.
b. Kay *made* a cake.

[15] Smith introduces a few semantic tests that can help investigate the aspectual meanings of sentences with respect to grammatical aspect. The reader is referred to (1991: 101-103) and (1997: 63-65) for more information on this topic.

[16] As it will be further discussed in 1.6.3.1 below, this time schema does not normally account for English stative sentences, for they describe situations that do not have clear endpoints.

When the perfective aspect is applied to denote a situation, hearers tend to view the situation as a punctual event, regardless of the existence of internal stages or its real duration. This impression of punctuality is derived from the "…closed nature of the perfective presentation" (Smith 1997: 72). However, it is not unusual to find perfective sentences that express duration. The sentence in (40) exemplifies a case in which the perfective aspect is said to denote a durative situation.

(40) a. Tenny *wrote* a book in a week.

Nevertheless, Smith states that "the punctual interpretation is strongest and most natural when duration is not explicitly mentioned in a sentence" (1997: 72).

1.5.2 Imperfective aspect

Imperfective sentences express the incompleteness of an action or state at a particular temporal point or reference. Because they present situations as incomplete or unfinished, they are said to be **open** informationally. In other words, they present parts of a situation, focusing on some internal stage of a situation and making no clear reference to its initial or final points. The imperfective aspect explicitly refers to the internal temporal structure of a situation.

According to Smith (1997), the unmarked imperfective focuses on the internal stages of an interval, whereas the marked imperfective conveys

information regarding the preliminary stages or the resultant stages of events. In the case of achievements, which are instantaneous events, the imperfective emphasizes the preliminary stages. For instance, the sentence under (41a) below does not inform us whether the achievement ever took place. There is actually no way of knowing what the result of the race was.

(41) a. Mary *was winning* the race.

It has been widely accepted that languages may vary with respect to the situations to which the imperfective aspect may be applied. The two most common imperfectives are the general imperfective and the progressive. In English, the imperfective is supposed to be used to denote activities and events (achievements and accomplishments) only. On the other hand, languages like Brazilian Portuguese allow imperfectives to be used to refer to stative situations as well[17]. Following Smith (1991, 1997), I will assume that this variation is guided by the principles and parameters of Universal Grammar.

1.5.3 Neutral aspect

Sentences that do not have an explicit grammatical morpheme associated with its main verb are said to be neither perfective nor imperfective. Smith (1991, 1997) names them 'aspectually vague sentences' and argues that they belong to the so-called 'neutral aspect' category. Because both open and

[17] For more on the difference between BP and English, see 1.6.3.2 below.

closed interpretations are available, they are considered to be more flexible than the other two categories.

According to Smith, these sentences present a grammatical aspect that is open but not unlimited. In spite of the fact that they allow for both open and closed readings, there is always one reading which is the most natural, even though the other interpretation is not excluded. “The neutral viewpoint includes one endpoint, the perfective both endpoints, the imperfective neither” (1997: 81). It is assumed that English does not have instances of neutral aspect. The availability of neutral aspect in BP will be discussed under 1.6.2.3 below.

1.6 The aspectual systems of English and Brazilian Portuguese

1.6.1 Inherent lexical aspect

1.6.1.1 States

In 1.4.3.1 above, some of the tests that have been used in order to distinguish stative from non-stative verbs were analyzed. In the present section, my goal is to compare the realization of Brazilian Portuguese and English verbs with respect to such tests.

It has been widely assumed that stative verbs in English do not normally appear in progressive contexts. Sentence (43a) below illustrates such

a restriction. In Brazilian Portuguese, however, the so-called **progressive test** does not give us the same result. It has been found that some stative verbs do not seem to present the same kinds of restrictions in BP as in English. In BP, all classes of verbs can be used in progressive contexts. Sentence (43b) is acceptable in everyday speech.

(43) a. * Bill *is knowing* the right answer.

b. Bill *está sabendo* da resposta certa.

Nevertheless, there are some stative verbs in BP that do not appear in the progressive tense: *be located*, *be tall*, *be green*, *be American*[18].

(44) a. * João *está sendo* alto.
'John *is being* tall'

b. * A cidade *está sendo* localizada na região serrana do estado.
'The city *is being* located in the mountains'

c. * Maria *está sendo* americana.
'Maria *is being* American'

It has also been shown above that a further property of stative events is that, unlike other kinds of verbs, statives generally cannot be used in the imperative in English (example 45). A similar claim can be made about statives in BP (example 46).

(45) a. **Be* tall!

b. **Believe* in God!

c. **Know* French!

[18] It is important to note that what is particular about this structure is the fact that this restriction applies only to predicates composed of the copula *be* plus an adjective.

(46) a. **Seja* alto!

b. **Acredite* em Deus!

c. **Saiba* francês!

In both English and BP, stative verbs are not allowed as complements of force and persuade (47a and 48a), whereas activities and accomplishments are (47 b and c – 48b and c).

(47) a. *Bill forced Paul to *know* French.

b. Bill persuaded Paul to *swim*.

c. Bill persuaded Paul to *draw* a picture.

(48) a. *João forçou Paulo a *saber* francês.

b. João persuadiu Paulo a *nadar*.

c. João persuadiu Paulo a *desenhar* uma gravura.

It is a common feature of BP and English that stative verbs cannot be combined with adverbs that describe voluntary actions such as deliberately and carefully:

(49) a. *Bill deliberately *knew* French.

b. Bill *swam* carefully.

c. Bill carefully *drew* a picture.

(50) a. *João deliberadamente *sabia* francês.

b. João *nadou* cuidadosamente.

c. João cuidadosamente *desenhou* uma gravura.

In both languages, only non-stative verbs (examples b and c) are used in the so-called 'pseudo-cleft constructions':

(51) a. *What Paul did was *know* French.

b. What Paul did was *swim*.

c. What Paul did was *draw* a picture.

(52) a. *O que Paulo fez foi *saber* francês.

b. O que Paulo fez foi *nadar*.

c. O que Paulo fez foi *desenhar* uma gravura.

Furthermore, there is the property of internal homogeneity, which can be tested by the use of the time adverb for. Examples (5a and b) above are repeated under (53). Examples (53a and b) show similar sentences in BP.

(53) a. Martha *loved* Paul for ten years.

b. Fred *owned* a Mercedes for 5 years.

(54) a. Marta *amou* Paulo por dez anos.

b. Fred *possuiu* um Mercedes por 5 anos.

The same kind of interpretation which is true for English is also true of the BP sentences. What the reader most naturally infers from the sentences above is that Martha loved Paul uninterruptedly during the ten-year period and that Fred owned a Mercedes for five years respectively.

Finally, statives do not co-occur in combination with adverbs of indirect duration in either language.

(55) a. * My brother slowly *believed* in Santa Claus.

b. * Meu irmão lentamente *acreditou* em Papai Noel.

1.6.1.2 Activities

In this section, I will compare the effects of the most important syntactic tests that have been used to distinguish activity from accomplishment predicates in BP and English:

- While activity predicates appear in combination with for-phrases, but do not appear with in-phrases, accomplishments occur with in-expressions but are not normally used in combination with for-expressions in either language.

(56) a. Kim *sang* for an hour.
b. * Kim *sang* in an hour.

(57) a. ? Tom *drew* a picture for an hour.
b. Tom *drew* a picture in an hour.

(58) a. Carla *cantou* por uma hora.
b. * Carla *cantou* em uma hora.

(59) a. ? Tom *desenhou* uma gravura por uma hora.
b. Tom *desenhou* uma gravura em uma hora.

- Similarly to the English sentences, activity and accomplishment verbs entail distinct conclusions in BP when they appear as complements of stop.

(60) a. Kim stopped *singing*.
b. Tom stopped *drawing* a picture.

(61) a. Carla parou de *cantar*.
b. Tom parou de *desenhar* uma gravura.

From (61a) we are entitled to conclude that Carla actually *sang*, whereas from (61b) we are entitled to infer that Tom has started *drawing* a picture, but cannot

know for sure how far he has gone in such a task. In fact, all we know is that he was, at some point in the past, *drawing* a picture.

- Unlike English, activity verbs in BP can generally occur as complements of finish, the same way accomplishments do.

(62) a. * Kim finished *singing*.
b. Tom finished *drawing* a picture.

(63) a. Carla terminou de *cantar*.
b. Tom terminou de *desenhar* uma gravura.

- Finally, BP and English allow similar interpretations for sentences with the adverb almost.

(64) a. Kim almost *sang*.
b. Tom almost *drew* a picture.

(65) a. Carla quase *cantou*.
b. Tom quase *desenhou* uma gravura.

1.6.1.3 Accomplishments and achievements

The distinction between bounded and unbounded events introduced above for English activities and accomplishments respectively is also true for BP. Recall the sentences (22a) and (22b) above, repeated here under (66a) and (66b) and their respective Portuguese translations (67a and b). In (66a) and (67a), the situation does not have a natural endpoint, whereas in (66b) and

(67b) the speaker assumes that the event will take pace within a limited time frame.

(66) a. John *is walking*.
b. John *is walking* to school.

(67) a. João *está caminhando*.
b. João *está caminhando* para a escola.

The so-called **entailment relation** between process and outcome introduced by Smith (1991, 1997) for English accomplishments is also true of Brazilian Portuguese accomplishment verbs. In any given situation in which (68a) and (69a) are true, (68b) and (69b) are also true. The opposite entailment, however, does not hold, that is, from the fact that Peter was writing a book last month, it is not reasonable to infer that he has finished writing it.

(68) a. Peter *wrote* a book last month.
b. Peter *was writing* a book last month.

(69) a. Pedro *escreveu* um livro mês passado.
b. Pedro *estava escrevendo* um livro mês passado.

The implications are quite distinct in the case of achievements. From the examples below, it is clear that there is no entailment relationship between achievements and processes in either language.

(70) a. Andy *was dying* last month.
b. Andy *died* last month.

(71) a. Andy *estava morrendo* mês passado.
b. Andy *morreu* mês passado.

The truth of both (70b) and (71b) does not entail the truth of (70a) and (71a) respectively. The opposite, however, does not hold (if, for example, Andy died in a car accident, which is an unpredictable situation).

Another similarity between the two languages discussed here is the fact that accomplishment verbs co-occur with both for and in-phrases and achievement verbs only allow in-adverbials (73) and (74), whereas activities only allow adverbial prepositional phrases with for (72)).

(72) a. Leo *drove* for an hour.
b. Leo *dirigiu* por uma hora.
c. ? Leo *drove* in an hour.
d. ? Leo *dirigiu* em uma hora.

(73) a. Fred *wrote* a letter in an hour.
b. Fred *escreveu* uma carta em uma hora.
c. Fred *wrote* a letter for an hour.
d. Fred *escreveu* uma carta por uma hora.

(74) a. Ed *found* his key in an hour.
b. Ed *encontrou* sua chave em uma hora.
c. ? Ed *found* his key for an hour.
d. ? Ed *encontrou* sua chave por uma hora.

Finally, it can be said that the two aspectual classes of verbs discussed above present similar characteristics in both English and BP.

1.6.2 Semantic features

1.6.2.1 Durativity

With respect to durative markings, it can be said that either BP or English feature similar contrasts. In other words, both languages possess ways of expressing the presence or absence of internal intervals within situations. Achievement verbs are usually associated with non-durative (i.e., punctual) events, while the other aspectual types (states, activities, and accomplishments) are assumed to refer to durative situations (i.e., situations that last for a while).

In discussing durativity in BP, Travaglia (1985: 74) maintains that it is characteristic of this language that situations are more commonly presented as durative than punctual. He justifies such an assertion by suggesting that there is a higher incidence of sentences of the former type in the language. He also says that BP presents a lower number of punctual markers compared to the number of durative markers available in the language. Travaglia states that these claims are based on Castilho's (1967) empirical findings. It is important to notice at this point, however, that Travaglia does not provide us with data to confirm his view. The claims he puts forward in his book are based mainly on his intuitions about aspect in BP. For that reason, his ideas have drawn harsh criticisms from many authors (see Godói, 1992).

1.6.2.2 Telicity

Telic sentences denote finite events, i.e., they describe events which possess an intrinsic goal or final point. Conversely, atelic sentences denote non-finite situations, i.e., situations which do not present a natural final point entailed by the sentence itself. The sentences in (34) above, repeated here under (75) below, exemplify such a distinction.

(75) a. Jane *is singing*.

b. Jane *is singing a song*.

Example (75b) describes an event that is expected to last for a definite period of time (i.e., the time the song lasts), whereas (75a) refers to a situation that does not have a predetermined duration. Even though we are aware that Jane's singing will eventually come to an end at some point that will be arbitrarily set by herself or by some other person or circumstance, such a fact is not entailed by the sentence itself. Accomplishment and achievement verbs are assumed to be telic, whereas activities are supposed to be atelic situations in both BP and English.

In discussing how telicity is realized in Brazilian Portuguese, Travaglia (1985) points out that verbs seem to change classes depending on the situation they are describing. According to him, telic verbs are usually employed to refer to punctual situations, whereas durative situations are more often described with atelic verbs, in spite of the fact that telic verbs may sometimes describe durative situations as well. He backs up this assertion by citing Castilho's (1967) contention that it is more common for Portuguese telic

verbs to become atelic than the opposite. Travaglia further claims that speakers of BP tend to present situations in a durative manner more often than from a punctual point of view and argues that this trend is confirmed by the fact that atelic verbs are more numerous in this language. Travaglia bases this claim on data introduced by Castilho (1967: 108), who reports to have found 121 atelic against 45 telic verbs in his investigation.

1.6.2.3 Stativity

In both languages, stativity *versus* dynamicity is the contrast that distinguishes states, on the one hand, and events on the other. As discussed in 1.4.2.3 above, unlike states, dynamic situations involve energy and are often associated with agency as well.

With respect to states in BP[19], Travaglia (1985: 81) points out that they can be temporary or permanent, an aspectual distinction which is lexicalized in Portuguese by the existence of the two copula verbs *ser* and *estar*[20]. That is, due to their durative and stative character, states can have a limited duration (*estar*) (76b), or an unlimited duration (*ser*) (76a).

[19] When discussing the stativity property, Travaglia (1985: 53) introduces one more distinction. He contends that stative verbs belong to a wider class of predicates, which he calls 'static' ('predicados de situação estática'). Nevertheless, the reason why he seems to believe that such a distinction is needed is unclear.

[20] For more on the *ser* vs. *estar* contrast in BP, see de Lemos (1981) and Schmitt (1992).

(76) a. Carlos *é* doente. – permanent state

'Carlos *is* sick' (i.e. he has an incurable disease)

b. Carlos *está* doente. – temporary state

'Carlos *is* sick' (i.e. he is sick now, but may recover soon)

Even in situations in which the speaker frames the period in a time line, Travaglia argues that the verb *ser* indicates something permanent in the period in question.

(77) a. Julio *foi* muito doente até os 10 anos de idade.

'Julio *was* very sick until the age of ten'

1.6.3 Grammatical aspect

1.6.3.1 Perfective

As I have shown in 1.5.1 above, perfective sentences are normally interpreted as **closed** informationally, presenting both the initial and final points of a particular situation. It is as if the situation were seen from the outside. With respect to English stative sentences, however, this time schema does not apply, since these sentences describe situations that do not have clear endpoints. As a consequence, when it is employed in English stative sentences, the perfective aspect is said to be marked in contrast to the prototypical unmarked perfective aspect, which holds for the other verb types (Smith, 1997: 69). Let us compare the interpretation of the following English sentences in the perfective (examples (78a), (78b), and (78c) are non-stative, whereas (79) is a stative).

(78) a. John *ran* in the park. (activity)

b. Kate *made* a cake. (accomplishment)

c. Jim *opened* the door. (achievement)

(79) a. Elaine *knew* all the answers to the test. (stative)

For all the examples in (78), the most natural reading is the one in which the situation is understood as closed, the only difference being as to whether the situation is viewed as terminated (i.e., having an arbitrary final point) or completed (i.e., having a natural final point). In (78a), the situation is terminated, whereas in (78b) and c the situations are completed (in (78c), in particular, the situation is presented as single-stage event). On the other hand, example (79) allows either an open or a closed reading.

(78) a. Elaine *knew* all the answers to the test.

b. … but she has forgotten them all. (closed reading)

c. … and she still knows them. (open reading)

It is worth noting that the main English tense to allow a perfective reading is the simple past. In BP, perfective interpretations are most common in the 'pretérito perfeito simples' (preterite), 'pretérito perfeito composto' (compound preterite), 'futuro do presente simples' (future), and 'futuro do presente composto' (future perfective).

Unlike English, the perfective aspect is available to all verb types in BP with a consistent closed interpretation. Even in stative sentences, the most natural reading is the one in which the situation is understood as closed, i.e., it does not continue into the present state. In all the examples that follow, the

conjunctions with assertions that the situations continue in the present result in a contradictory statement (sentence (80d)).

(80) a. No verão passado, eles *viajaram* para a praia (? e talvez ainda estejam viajando)
'Last summer they traveled to the beach (and perhaps are still traveling)'

b. Mês passado, João *escreveu* um livro (? e talvez ainda esteja escrevendo o livro)
'Last month John wrote a book (and perhaps he is still writing the same book)'

c. Ana *abriu* as janelas da casa pela manhã (? e ainda está abrindo as mesmas janelas)
'Anna opened the windows of the house in the morning (and she is still opening them)'

d. Maria *esteve* doente hoje de manhã (? e ela ainda está doente agora)
'Mary was sick this morning (and she is still sick now)'

Similarly to English, the perfective aspect presents activities as having an arbitrary final point (80a), accomplishments as having a natural final point (80b), and achievements are characterized as single-stage events (80c). Conversely, the final point of a stative situation is a change out of state (80d) [21].

Moreover, as it was discussed in 1.5.1, the perfective aspect normally presents the situation as a punctual event, irrespective of the

[21] An interesting analysis of French introduced by Smith (1997) can be applied to the description of BP as well. In sentences like 'Elaine *sabia* as respostas para o teste' ('Elaine knew all the answers to the test'), it may well be the case that she still knows them. In such a case, the claim is that the BP sentence provides no information regarding the continuation of the state: "the situation that may continue is the resulting state, not the change into that state" (p.195).

existence of any internal stages or its real duration. Nevertheless, perfective sentences that express duration are also commonly found. The sentences in (81) exemplify a case in which the perfective aspect is said to denote durative situations in both languages (Brazilian Portuguese and English).

(81) a. Getúlio Vargas *governou* o Brasil durante 20 anos.
'Getúlio Vargas governed Brazil for 20 years'

b. Larry *wrote* a letter in an hour.

1.6.3.2 Imperfective

The main kind of imperfective aspect available in English is the progressive (*be* + V-*ing*), usually applied to non-stative verbs (examples 82a and b). Progressive constructions with statives are, however, possible in a marked form, especially in spoken language. As (83a) below will show, when structures like these are used in English, they normally present a state as an event[22].

(82) a. George and Ken *were playing* volleyball when it started raining last night.

b. Kelly *is writing* a detective story.

(83) a. (two people in a party)
A: Are you enjoying the party?
B: Oh, yes. I'*m liking* it very much! I'm having a great time here.

[22] Stative progressives in English have been the focus of intense debate: see Smith (1983, 1997), Landman (1992), Shirai (1994), Leech (1981), among others.

Thus, the most basic use of the progressive aspect is to present the internal stages of a situation. For that reason, non-stative, durative situations – accomplishments and activities — are more commonly associated with the progressive than achievement verbs. As we have already seen above, achievement sentences are instantaneous events presenting therefore no internal stages. Accordingly, when the progressive aspect is used in achievement structures, it is also marked and the focus is shifted to denote the preliminary stages of the event.

(84) a. The horse *was winning* the race.

Regarding conventions of use, Smith (1997) notes that, by general pragmatic rules, the perfective is the dominant aspect in English due mainly to its availability to all verb types. Nevertheless, when there are no semantic or pragmatic factors that guarantee that the perfective is the most appropriate aspect for the situation, the progressive may appear. For the most part, it is used to express that a situation is or was in progress at a given time. According to her, "when a speaker uses the progressive, the receiver is entitled to assume either that the situation does not warrant the perfective, or that a special emphasis of some kind is being made" (1997: 175).

Two characteristics of the BP tense/aspect system deserve special attention here: the existence of imperfective aspect distinct from progressive (not present in English), and the acceptability of stative progressives. Let us consider in more detail the case of the imperfective aspect. It is a well-know fact that the imperfective aspect occurs with all verb types in BP. Castilho (1967)

recognizes the existence of three different types of imperfective: the inceptive, the cursive, and the terminative (p.51). According to Costa (1997), the imperfective is used to emphasize at least one of three possible features of a situation: its durativity, one of its internal phases (perhaps the mere existence of internal phases), or the fact that it is a resulting state of some preceding process. It is found in the following tenses: 'pretérito imperfeito', 'gerúndio' (a pheriphrastic construction similar to the progressive in English), 'particípio', and 'pretérito perfeito composto'. Compare the following sentences which show the perfective/imperfective contrast in BP.

(85) a. Pedro *jogou* futebol. ('pretérito perfeito' – perfective aspect)
'Pedro played[Perf] soccer'

b. Pedro *jogava* futebol. ('pretérito imperfeito' – imperfective aspect)
'Pedro played[Imperf] soccer'

The so-called 'Pretérito Perfeito' (85a) describes the occurrence of a fact which not only took place at some time in the past, but has also terminated. Similarly to the employment of the Simple Past tense in English, the 'Pretérito Perfeito' expresses an instance of the perfective aspect. In the example above, the speaker is specifically referring to a particular occasion in which Pedro played soccer. Hence, it is well-understood from sentence (85a) that the fact is terminated, completed. On the other hand, in using the 'Pretérito Imperfeito' (85b), the speaker does not emphasize the time boundaries of the situation. That is, focus is given to the internal duration of the fact reported and not to its time limits.

With respect to the progressive aspect, in particular, it is worth pointing out that unlike English, progressive statives are commonly found in spoken and written language (86b and 87b).

(86) a. Jorge *gosta* da Marta.
'George likes Martha'

b. Jorge *está gostando* da Marta.
'George is liking Martha'

(87) a. Pedro *sabe* como chegar até o hotel.
'Peter knows how to get to the hotel'

b. Pedro *está sabendo* como chegar até o hotel.
'Peter is knowing how to get to the hotel'

Similarly to what happens in the case of the other verb types, the progressive form yields an inference not triggered by the present form of the verb, which can be understood in the following manner: in the past, the situation denoted by the verb did not hold. Thus, as in the case of other verbs, the use of a stative verb in the present progressive form denotes a situation that results from a change, focusing on its contrast with some preceding state. Oliveira & Lopes (1995) state that

> when a temporal restriction is observed, there is a kind of re-categorization of the state into an ongoing process. The Simple Present with stative predicates is the privileged tense for representing permanent or relatively stable properties of an individual. When they occur in a Present Progressive form, the same stative predicates describe properties of temporarily bounded stages of an individual. (p. 108)

1.6.3.3 Neutral

Smith (1991, 1997) introduced the term 'neutral' to define those sentences that are neither perfective nor imperfective, and thus do not have an explicit grammatical morpheme associated with their main verbs. She argued that such sentences can have either open or closed readings. According to the author, despite the availability of both open and closed interpretations, there is always one reading which is the most natural. She further contends that English does not have any instances of neutral aspect, whereas French does.

In his detailed analysis of aspectual distinctions in BP, Castilho (1967) introduces a category similar to Smith's neutral aspect, distinct from both perfective and imperfective aspects, which he names 'indeterminate aspect' ('aspecto indeterminado'). He maintains that sentences in the so-called 'indeterminate aspect' are employed by speakers to talk about general assertions and truisms. Sentences in the present tense of the Indicative mode are provided as examples of this type of aspect.

(88) a. A Terra gira em torno do Sol.
'The Earth revolves around the Sun'

b. A semana tem sete dias.
'A week has seven days'

Castilho claims that in using this kind of sentence the speaker expresses his/her intention of presenting the fact denoted by the verb without any reference to its duration or completeness. The author further maintains that there are other tenses, apart from the simple present, in which indeterminate

aspect may be present in BP, such as the simple past tense (pretérito perfeito simples). Such cases of neutral/indeterminate aspect, however, appear more rarely in the language.

(89) a. Quem *morreu* morreu.[23]
'The one who died, did die.'

In this essay, I will assume for BP a similar position put forward by Smith in her analysis of French by Castilho (1967), therefore arguing that the neutral aspect is present in BP mainly in the 'present' of the Indicative mode.

1.7 Conclusion

In conclusion, in this present chapter I had the goal of reviewing the most essential distinctions introduced in the literature on aspect. The discussion of the aspect *versus* tense contrast was followed by the analysis of the two types of aspectual features that may be found across languages, i.e., grammatical aspect and inherent lexical aspect. With respect to inherent lexical aspect, I have discussed Vendler's fourfold classification (the framework adopted here) in detail, providing a thorough characterization of the properties of each aspectual category: stative, activity, accomplishment and achievement situation types. The sorts of tests normally used to classify verbs according to aspectual features were exhaustively discussed and examples of situation types

[23] This example, originally created by V. Ferreira (1963), was taken from Castilho (1967: 105).

were also given. In addition, the characterization of the essential properties of each aspectual category – durativity, telicity and stativity – was also comprehensive. Perfective, imperfective and neutral aspects – the three kinds of grammatical aspect – have been discussed here. Furthermore, analyses of how the semantic properties of lexical and grammatical aspect are realized in both languages involved in this study – English and Brazilian Portuguese – were also provided.

In the next chapter, I intend to examine the literature on the acquisition of tense and aspect by first and second language learners and discuss the descriptive and explanatory powers of the most common approaches to the phenomena.

2 LANGUAGE ACQUISITION OF ASPECT

2.1 Introduction

In this chapter, I shall provide a comprehensive review of the studies that have investigated the acquisition of tense-aspect morphology by both first and second language learners. The strengths and weaknesses of the studies as well as the main conclusions presented by the authors will be critically discussed. The major explanations for aspect phenomena that are found in the literature will also be reviewed.

2.2 The acquisition of tense and aspect: the aspect hypothesis

The first studies that investigated tense-aspect morphology in both first and second language acquisition processes did so incidentally. The so-called **morpheme studies** of the 1970s and 1980s aimed at investigating whether the acquisition of grammatical morphemes complies with some kind of definite/pre-determined order. Following the pioneer longitudinal study developed by Roger Brown (1973) that concluded that fourteen English morphemes were acquired in a similar sequence by three children (Adam, Eve and Sarah), many others revealed that there seems to be a sequence of

acquisition of particular grammatical structures for L1 acquisition (e.g., de Villiers & de Villiers, 1973). In the case of second language research, stages of acquisition for specific grammatical features – in particular, verbal morphology – were also found in studies with English learners from different first language backgrounds and of different ages (see Dulay & Burt, 1973, 1974; Larsen-Freeman, 1975; Bailey, Madden & Krashen, 1974; and Krashen, 1985). Very strong patterns of similarity across learners were thought to suggest that second language learners acquire particular grammatical morphemes in accordance with universal stages of development.

These findings have recently led to a series of studies laid out to investigate the existence of a consistent pattern of development in the acquisition of tense-aspect morphology. In other words, these studies have attempted to examine whether there is a set of universal principles that language learners use to mark verbal aspect in both first and second language contexts. Many authors have argued lately that the inherent aspectual class of a verb plays a role in its acquisition and that both L1 and L2 learners acquire aspectual distinctions prior to tense features. The **Primacy of Aspect Hypothesis** (or the POA hypothesis), presented below in its most recent formulation (Andersen & Shirai, 1996), was initially developed by Bloom et al. (1980) and Andersen (1986, 1989, 1991). Its descriptive claims are:

1. Children first use past marking (e.g., English) or perfective marking (Chinese, Spanish, etc.) on achievement and accomplishment verbs, eventually extending its use to activity and stative verbs. This roughly corresponds to Bickerton's (1981) punctual-non-punctual distinction (PNPD).

2. In languages that encode the perfective-imperfective distinction, imperfective past appears later than perfective past, and imperfect past marking begins with stative verbs and activity verbs, then extending to accomplishments and achievement verbs.

3. In languages that have progressive aspect, progressive marking begins with activity verbs, then extends to accomplishment and achievement verbs.

4. Progressive markings are not incorrectly overextended to stative verbs. This corresponds to Bickerton's (1981) state-process distinction (SPD).

(Andersen & Shirai, 1996: 533)

Most studies to be reported here do not focus on the Primacy of Aspect Hypothesis in its totality. Rather, they normally focus on one or two of its claims. In the next section, the L1 studies will be introduced, and in the subsequent section I will present the L2 studies on aspect, followed by a summary of the explanations for the phenomena provided in the literature.

2.3 First language studies on the acquisition of tense and aspect

Two groups of results will be reported in this section. Initially, I will present the L1 studies consistent with the Primacy of Aspect Hypothesis, discussing the evidence that has been used to give support to one or more of the claims stated above. Next, possible counter-examples will be introduced. Some reanalyses of the counter-evidence to the POA will also be given. In what follows, I will deal with the descriptive claims derived from the evidence as well as with the explanatory issues brought up by the authors of each study. The

main approaches developed in the literature to account for the data will be reviewed and discussed under 2.4 below. For a full review of the L1 studies, see Table 5.

Table 5: Empirical L1 studies on the acquisition of aspect and tense

Target language	Author	N	*Age*[24]	Type of data
Chinese	Erbaugh (1978)	4	2;0 to 3;0	Spontaneous interaction
	Li (1989)	135	3;11 to 6;4	Experimental elicitation
English	Antinucci & Miller (1976)	1	1;9 – 2;2	Spontaneous interaction
	Bloom et al. (1980)	4	1;10 – 2;6	Longitudinal, spontaneous interaction
	Brown (1973)	3	1;6 – 3;8	Longitudinal, spontaneous interaction
	Harner (1981)	100	3;0 to 7;11	Experimental elicitation
	Kuczaj (1976, 1978)	1	2;4 – 5;0	Longitudinal, spontaneous interaction
	Kuczaj (1976, 1978)	14	2;0 to 5;1	Spontaneous interaction
	McShane & Whittaker (1988)	45	3;0 to 5;9	Experimental elicitation
	Osser & Dillon (1969)	35	2;6 to 5;11	Experimental elicitation
	Shirai (1994), Shirai & Andersen (1995)	3	1;6 – 4;10	Longitudinal, spontaneous interaction
	Smith (1980)	17	2;5 to 5;8	Spontaneous interaction
		28	4;7 to 6;6	Experimental elicitation
Finnish	Toivainen (1980)	25	1;0 – 4;4	Longitudinal, spontaneous interaction
French	Bronckart & Sinclair (1973)	74	2;11 to 8;7	Experimental elicitation
	Champaud (1993)	1	1;9 – 2;5	Longitudinal, spontaneous interaction
German	Behrens (1993)	4	1;9 – 4;0	Longitudinal, spontaneous interaction
Greek	Stephany (1981)	4	1;8	Spontaneous interaction
Hebrew	Berman (1983)	Hundreds	One-word stage to 4+	Spontaneous interaction

[24] Age: ages of children studied. 1;9 – 2;6 indicates the child(ren) was/were studied over time, whereas 3;0 to 6;4 indicates the study included a number of children ranging from 3;0 to 6;4.

Italian	Antinucci & Miller (1976)	7	1;6 – 2;6	Longitudinal, spontaneous interaction
Japanese	Cziko & Koda (1987)	1	1;0 – 4;11	Longitudinal, spontaneous interaction
	Rispoli (1981)	1	1;6 – 2;1	Longitudinal, spontaneous interaction
	Shirai (1993)	1	0;11 – 2;2	Longitudinal, spontaneous interaction
Polish	Weist (1983)	20	2;6 & 3;6	Experimental elicitation (comprehension)
	Weist et al. (1984)	6	1;7 – 2;5	Longitudinal, spontaneous interaction
	Weist et al. (1984)	18	2;6 & 3;6	Experimental elicitation
Portuguese	De Lemos (1981)	3	1;0 – 2;5	Longitudinal, spontaneous interaction
	Simões & Stoel-Gammon (1979)	4	1;8 – 3;0	Longitudinal, spontaneous interaction
Spanish	Eisenberg (1982)	2	1;4 – 2;4 & 1;10 – 3;0	Longitudinal, spontaneous interaction
	T. Jacobsen (1986)	1	2;3 – 3;5	Longitudinal, spontaneous interaction
Turkish	Aksu-Koc (1988)	3	1;9 – 2;6	Longitudinal, spontaneous interaction
	Aksu-Koc (1988)	60	3;0 to 6;4	Experimental elicitation

(adapted from Andersen & Shirai, 1996: 534)

2.3.1 Evidence for the Primacy of Aspect Hypothesis

Bronckart & Sinclair's (1973) paper reports on the use of verbal morphology by 74 French-speaking children between the ages of 2;11 and 8;7, divided into five age groups. Data was elicited by asking subjects to describe actions that the researchers performed using toys. Three aspects were tested: type of result, duration and frequency of actions. It was found that children primarily use the present forms of verbs for atelic, inherently durative actions (activity verbs) and the past forms to report actions with clear end results (that is, the use of perfective was associated with telic verbs: accomplishments and

achievements). Bronckart & Sinclair also noted that these trends diminished as the children grew older: the two oldest groups (over 6) were found to employ correct forms for all verbs, regardless of aspectual distinctions, resembling adult usage in which the grammatical morphemes are mainly used to express temporal relations.

Antinucci & Miller (1976) investigated the speech of 7 Italian-speaking children (age ranging from 1;6 to 2;6), and 1 English-speaking child (1;9 – 2;2) longitudinally. They found that all subjects first used past tense morphology to encode events described by telic verbs. Past states and activities were referred to by the use of imperfective marking in the case of the Italian subjects. In the case of the English subject, regular and irregular forms of the past tense were employed for telic verbs, while the Italian children used past participle forms for such verbs that present situations with clear-end results. These findings are similar to what was reported by Bronckart & Sinclair (1973).

It is worth noting that the two studies reported above were conducted within the Piagetian framework. In both experiments, the authors contended that cognitive deficiency prevented the children from marking verbs with appropriate, adult-like verb inflections. The data was interpreted as evidence for the claim that the children tested did not have the concept of tense (i.e., the concept of temporal deixis), therefore employing verbal morphology to encode the semantic properties of events that were more relevant to them, for instance, events with clear-end results.

The explanatory power of these claims has been questioned in the literature. First of all, as Jabbari (1998) notes, if it is the case that children present a cognitive limitation that prevents them from using the appropriate verb inflections from the very beginning of the acquisition process, the question that arises relates to the criteria that children actually employ in classifying aspectual verb classes. In other words, on what basis do children decide, for instance, that certain verbs belong to the class of events with clear-end results while others do not? If what happens is that they use some set of innate **linguistic universals** to encode aspectual classes – as argued by Bickerton (1981), then the linguistic deficit explanation is dispensable. In that case, the assumption that children are born with a set of linguistic universals which are responsible for the distribution of verb types according to aspectual features also provides an account for the data referred to above. Based on the facts introduced by Bronckart & Sinclair, and by Antinucci & Miller, as well as on his pidgin-creole studies, Bickerton (1981) contends that the ability of making distinctions such as state versus process, specific versus non-specific, and punctual versus non-punctual events is innately specified (his principles are similar to claims 1 and 4 of the POA hypothesis presented above)[25].

Bloom, Lifter & Hafitz (1980) examined the spontaneous speech of four American English-speaking children, ranging in age from 1;11 to 2;4, in a longitudinal study. They report that the verb inflections *–ing*, *-s*, and *IRREG* were first employed by the children around the same time, but were distributed selectively among verbs according to their aspectual features. They argued that

[25] Bickerton's ideas will be further detailed below.

the development of the early verb system seems to be guided by the distribution of semantic notions like durative versus non-durative and completive versus non-completive (telic versus atelic in the Vendler terminology adopted here). The cited authors found that the progressive *–ing* occurred almost exclusively with events that were durative and non-completive (our activity verbs), the past *-ed/IRREG* was more frequently associated with non-durative and completive events (our achievements) and the third person present *–s* was more frequently associated with durative and completive events (which have no direct correspondence within the Vendler schema). It is also interesting to note that state verbs were inflected less often than activity verbs by their children.

Bloom et al. (1980) interpreted their findings as evidence for what they called the **aspect before tense** principle, and suggested that "the semantics of the verbs that the children were learning was the major influence on their learning of verb inflections" (p. 404). To back up the aspect before tense principle, Bloom et al. (1980) also made use of the model introduced by Woisetschlaeger (1976, in Bloom et al. 1980: 407), and argued that aspectual markers were acquired first because they are closer to verb stems than tense markers[26].

It should also be mentioned that Bloom et al. (1980) conceive the aspect before tense principle as relative and not absolute. Even though it may be the case that children are strongly influenced by the inherent lexical aspect of verbs in the beginning of the language acquisition process, the authors argue

[26] As I will discuss in section 2.4, Andersen (1989, 1993) draws on Bloom et al.'s data and ideas to formulate his Relevance Principle.

that children are indeed learning tense relations at the same time and not at a subsequent moment. In other words, it is not the case that children start learning time relations only after they have learned aspectual categories.

With regard to the acquisition of Brazilian Portuguese verbal morphology, two studies will be reported: Simões & Stoel-Gammon (1979) and de Lemos (1981a, 1981b). Simões & Stoel-Gammon (1979) investigated the development of inflectional markers in the speech of one Portuguese-speaking child, who was 2;1 at the beginning of the data collection and 3;0 at the end. Analyses of longitudinal data from three other young children (whose ages ranged from 1;8 – 2;1 at the beginning of the study to 2;2 – 3;0 at the end) were also presented as supplemental evidence for the claim that inflections marking tense were acquired earlier than those marking person. Even though the main focus of their study was to analyze the initial phases of the development of person markers on verbs, the cited authors maintain that their data indicated that the semantic features of verbs contribute to their distribution in early speech[27]. Simões & Stoel-Gammon conclude by saying that "perfect tense inflections occur early in the child's speech but only on verbs expressing a completed action in the immediate past" (1979: 66).

De Lemos (1981a, 1981b) analyzed two sets of data. The first set is composed of data from Tiago, who was audio-recorded in interaction with his mother, caretaker and sister on a weekly basis from the ages of 1;0 to 2;0 and was also video-taped 12 times during the same period; the other child (Richard)

[27] In fact, this experiment has been cited by Andersen (1989), Andersen & Shirai (1994, 1996) and Jabbari (1998), among others, as important evidence in support of the POA hypothesis.

was video-taped 8 times interacting with his mother from 0;8 to 1;3. The second set of data comes from two children (non-identical twins) called Renata and Augusto, who were audio-recorded from 1;0 to 2;5 and videotaped from 1;3 until 1;6 and from 1;9 until 2;2 (8 recordings sessions in total). The study developed by the author set out to investigate the relation between emergence of verbal morphology for tense-aspect marking and extra-linguistic restrictions resulting from interactional formats in discourse. According to de Lemos (1981), her data reveals that perfective markers were first observed with accomplishment verbs, such as *cantar uma música* '*sing a song*', and were used "exclusively as markers of completion of the child own's actions" (p. 59). Furthermore, perfective markers were associated with achievement verbs, such as *caiu* '*fell down*' or *quebrou* '*broke*', only "in contexts where the child seems to be attending to changes of state resultative of unobserved processes" (p. 59). In addition, she argued that the first occurrences of the progressive forms were associated with activity verbs, such as *dançar* '*dance*' and *pular* '*jump*', "in contexts where the child was calling attention for the activity he was engaged in" (p. 59). Besides, she asserts that the imperfective forms of the verbs appeared only much later in the process, around the first half of the third year and "at first only with state and activity verbs in imaginary contexts such as pretend-play and story-telling formats" (p. 59). The cited author further points out that imperfective tense forms in Italian were reported to have occurred in similar contexts by Antinucci and Miller (1976), that is, with activities and states and in make-believe and story-telling contexts.

At first, it seems that both studies on Portuguese (Simões & Stoel-Gammon, 1979; de Lemos, 1981a, 1981b) provide evidence for the suggestion that children first attach inflectional morphemes to verbs according to their inherent lexical aspect, following the patterns found in the analysis of French, Italian and English. In fact, many authors have relied on these results to strengthen their position for 'aspect before tense' (in particular, see the discussion in Andersen, 1989; Robison, 1995a; Andersen & Shirai, 1996; and Jabbari, 1998). What raises doubt here is the fact that none of the two studies referred to above seem to provide clear arguments in support of the strong claims they make. First of all, none of them clearly set out to investigate the Primacy of Aspect Hypothesis itself, but use its descriptive claims to favor other theories. Besides, it would be extremely interesting to know the criteria they have used for classifying verbs, which are not explicitly mentioned in the published studies.

Up until now, I had the goal of presenting a comprehensive review of the findings that have been exposed in the literature as evidence for the POA hypothesis. In what follows, I will discuss the studies that allegedly provide some evidence against it.

2.3.2 Evidence against the Primacy of Aspect Hypothesis

The first study to be reported here is the one developed by Weist, Wysocka, Witkowska-Stadnik, Buczowska & Konieczna (1984), which involves

longitudinal and cross-sectional data from Polish children. In the longitudinal design, six children (ages ranging from 1;7 to 2;2) were tape-recorded in interaction with their caretakers. The cross-sectional design involved nine 2;4 – 2;8 year-old and nine 3;4 – 3;11 year-old children.

Based mainly on their longitudinal results, and using Vendler's fourfold verb classification, Weist et al. (1984) strongly criticize the aspect before tense view, which they name **defective tense hypothesis**. They hold that when tensed utterances first emerge in child language, they express deitic relationships as well as aspectual marking and not the contrary as their opponents have argued for. Therefore, in their opinion, tense is not defective in the early stages of acquisition, and, in fact, contrasts in aspect and contrasts in tense marking emerge at the same time[28]. Apart from that, they also observed that (a) imperfective activity verb phrases were associated with past-tense inflections from the very beginning; and (b) telic verbs were produced irrespective of observable resulting states.

> The aspectual distinction between imperfective and perfective aspect and the deitic relationship between present and past tense evolve simultaneously in child Polish. (1984: 371)

Moreover, Weist at al. (1984) challenge the tenability of a cognitive deficit view as maintained by Antinucci & Miller (1976). While they agree that the early temporal system may be limited in the sense that children may not be able to distinguish event time from reference time in the early stages, they say that it is by no means defective.

[28] Both tense and aspect are grammaticalized in Polish.

Independent reanalyses of the tables provided by Weist at al. (1984)[29] are found in Andersen (1989), and Bloom & Harner (1989). Each showed that not only are achievements and accomplishments the two most frequent verbs to be associated with past tense inflections, but also that imperfective markings are mainly used with activities in the early stages, both of which conform to the results of the other aspect studies. Andersen (1989) puts forth the view that what Weist et al. (1984) do, in fact, dispute is an overly strong view of the Primacy of Aspect Hypothesis, which he labels **absolute defective tense hypothesis**. He claims that although the data in Weist et al. invalidates an all-or-nothing version of the hypothesis, it clearly supports a **relative** version of it, which he names **relative defective tense hypothesis**, according to which early verbal morphology is generally guided by inherent aspectual features of verbs. In Andersen's opinion, the relative defective tense hypothesis is similar to his Primacy of Aspect Hypothesis.

> According to the absolute version, only telic verbs receive past-tense inflections; tense distinctions will be redundant and will only accompany aspectual distinctions; only references to immediate past situations will be made. (…) Weist et al.'s claim is correct if they were criticizing this absolute version of the defective tense hypothesis. However, a less stringent version of POA still holds true: namely, past inflections are predominantly attached on achievement and accomplishment verbs in the early stages, and imperfective past marking which emerges later, is used predominantly with state-activity verbs in the beginning. (Andersen & Shirai, 1996: 536)

Andersen & Shirai (1994, 1996) further point out that the POA hypothesis version that they advocate makes no claims about the cognitive

[29] Weist et al. (1984) originated an interesting debate between Weist & Bloom (Rispoli & Bloom, 1985; Smith & Weist, 1987; Bloom & Harner, 1989; and Weist, 1989).

ability/inability that very young children may have to mark tense distinctions, whereas the defective tense hypothesis does.

Possible counter-examples to the POA hypothesis are also found in Jacobsen (1986) and Eisenberg (1982), who investigated Spanish-speaking children, Cziko & Koda (1987), who tested Japanese acquisition, Li (1989), who worked on Chinese verbal morphology acquisition, and Shirai (1994), who analyzed the speech of three English-speaking children.

Jacobsen (1986) analyzed the speech of a Peruvian Spanish-speaking child, called Kiki, between 2;3 and 2;8, during a six-month period. Aiming at assessing the extent to which aspect and tense features are related in early acquisition, as well as the cognitive routes underlying the linguistic representation of the past tense, Jacobsen makes use of Piaget's framework. Comparing her findings with Antinucci & Miller's (1976) results, she gives support to the POA claim that children encode aspectual markings prior to tense representations and that the two are acquired independently. Her data reveals that past (*pretérito*) and perfective (*pretérito perfecto*) markings are exclusively used in association with change of state verbs, whereas stative and activity verbs are not marked with any past tense form in the early stages. Apart from that, the progressive inflection (*gerundio*) is initially attached to activities, but not to states or change of state predicates.

Although some of the results reported by her are consistent with the POA hypothesis, there is one exception. Contrary to Antinucci & Miller's findings, her subject did not use the past participle form to encode punctual

events (achievements), but instead to mark a situation in which a state that continues in the present time is referred to (see Jacobsen, 1986: 105 for a few examples). Recall that in the case of the Italian children, the participle was mainly used to mark the 'end of a state' – that is, it was attached to verbs expressing punctual and telic events.

Andersen (1989: 22-23) and Andersen & Shirai (1996: 537-538) provide somewhat detailed reanalyses of Jacobsen's examples and dispute her interpretation of the data. According to Andersen & Shirai, the author presents a number of unclear examples in the study. Besides, they claim that a possible interpretation would be that children gave a distinct non-adult-like function to each of the two different forms of past in Spanish. In other words, it may be the case that perfective past was used for achievements and past participle for states that continue in the present time. According to them, this claim is reasonable once we take into consideration how subtle the distinction between the two tenses is (see Andersen & Shirai, 1996: 537-538 for more on this).

Eisenberg (1982) investigated spontaneous speech of two bilingual Spanish-English-speaking girls in a longitudinal study. The first subject's age range was from 1;4 to 2;4; the other child was 1;10 in the beginning of data collection and 3;0 at the end.

The author presents her data as evidence against the POA hypothesis, claiming that for neither of her subjects do aspectual features seem to influence the appearance of verbal morphology. According to her analysis, atelic verbs were not employed to mark imperfective aspect and that telic verbs

were not associated with perfective aspect, either. Notwithstanding, while being used by some to raise doubts with respect to the universality of the POA claims[30], Eisenberg's findings have also been severely criticized in the literature. In particular, the set of criteria she used for establishing verb type distinctions has been contested. Andersen (1993) mentions an unpublished paper by Gonzales (1989), in which a reanalysis of Eisenberg's data was developed, to justify the claim that her results are, in fact, consistent with the POA. He says:

> Eisenberg did not use the same criteria for establishing these (aspectual) categories, however, that the other studies used. When her data are reinterpreted in terms of the Vendler (1967) and Mourelatos (1981) categories of states, activities, telic events, and punctual events, they fit the patterns found in other studies (…) (1993: 317).

In other words, Andersen further argues that the Spanish data shows that initially the subjects exclusively used perfective and imperfective forms in association with telic/punctual events and in with activities respectively.

With respect to L1 Japanese acquisition, contradictory results have been reported. On the one hand, Cziko & Koda (1987), who tested a Japanese subject aged between 1;0 and 4;11, state that aspectual semantics did not influence their subject's acquisition of time markers the way the defenders of the POA would like to suggest. In particular, they reported that no relationship between punctuality and past-time morphology was found in their data. Still,

[30] E. V. Clark (1985), in her analysis of the acquisition of Romance languages, for instance, quotes Eisenberg's results as evidence refuting the POA claims (p. 750).

they have found that the progressive inflection was not over-generalized to stative verbs, evidence that gives support to the POA[31].

On the other hand, it is interesting to note that Shirai (1991), based on the analysis of the same data discussed in Cziko & Koda (1987), reported that the Japanese child followed the pattern predicted by the POA. That is, early association of imperfective marking (*–tei*) for activity events and perfective morphology in achievement situations (see Shirai, 1991, for further discussion on the issue).

Finally, the study that raises most doubts about the POA hypothesis is the one developed by Li (1989). Li obtained data from 135 Chinese Mandarin-speaking children aged between 3;11 and 6;4, with the use of three different tasks: imitation, comprehension, and production. In particular, he tested Bickerton's two hypotheses, the so-called 'punctual-non-punctual distinction' (PNPD) and the 'state-process distinction' (SPD) – which roughly correspond to predictions 1 and 4 of the POA hypothesis stated above. His general conclusion was that his findings did not corroborate these two hypotheses, but endorsed Slobin's (1985) result-process distinction as a cognitive universal instead.

In his appraisal of Bickerton's (1981) approach, Li (1989) provides us with severe critical remarks against Bickerton's line of reasoning. He particularly criticizes Bickerton's lack of clarity with respect to the terminology adopted and to the levels of aspect at which his claims are assumed to apply. In other words,

[31] However, Youseff (1988, 1990) indicated some methodological problems in Cziko & Koda's investigation.

Li contended that Bickerton's distinction between the notions of grammatical aspect, inherent lexical aspect and situational characteristics[32] of an event creates serious confusion. He insists that it is not at all clear whether Bickerton posits that his punctual-non-punctual distinction applies to all three levels or not.

Andersen & Shirai (1996) present a very interesting reinterpretation of Li's data within the POA framework, and point out that Li's main argument, i.e., that Slobin's result-process distinction is innate, does not go against the hypothesis. In fact, they see Li's data as providing additional support for the POA hypothesis. In their opinion, it is possible to view Slobin's result-process principle in the following way: (a) process verbs are the same as activity verbs (in Vendler's terminology); and (b) resultative verbs possess similar features to Vendler's telic verbs (achievements and accomplishments), i.e., they have a clear end-point. It is important to notice that, in spite of not presenting serious challenges to the POA hypothesis in descriptive terms, Li's argument about the innateness of the result-process principle brings about a discussion at the explanatory level, which goes far beyond the POA descriptive power.

However, the authors admit that some of Li's findings pose serious problems for the POA. First of all, subjects did not associate the perfective morphological marking (*-le*) with punctual verbs in the comprehension task. To make matters worse, comprehension was actually facilitated in situations where

[32] The situational aspect or the situational property of an event is typically understood as involving the characteristics of the event in terms of real-world situations. For example, the phrase *look at* is normally conceived as a process, i.e., its inherent aspect is activity, which has [- telic] and [- punctual] features, as can be seen in the sentence *Mary looked at the picture very carefully*. However, in the sentence *Mary looked at him when he shouted*, it is clearly an achievement, which has [+ telic] and [+ punctual] features.

the progressive marker (*-zai*) and not the perfective marker (*-le*) had been used with achievement verbs, clearly contradicting the POA predictions. Second, data analysis showed that the progressive inflection was incorrectly used with stative verbs in the production task. Andersen & Shirai conclude by saying that

> Li's study presents two important challenges to the POA hypothesis for further investigation: (1) it is not the temporal contour of the situation (i.e., punctuality) that is important, but the result that arises out of a situation that is important for past-perfective marking; and (2) over-extension of progressive markers to stative verbs may not be non-existent. Otherwise, Li (1989) reported results consistent with POA. (p. 541)

Consonant with Li's (1989) findings regarding the over-extension of progressive markings on to stative verbs, Shirai's (1994) results also present problems for the POA advocates. Using data taken from the CHILDES (Child Language Data Exchange System, MacWhinney and Snow, 1985, 1990) corpus, Shirai investigated the spontaneous speech of three English-speaking children in interactional situations with their mothers and showed that incorrect use of the progressive inflection does in fact occur. His data consisted of the transcribed speech of Adam (aged between 2;3 and 4;10), Eve (aged between 1;6 and 2;3) and Naomi (aged between 1;6 and 4;9)[33] and their mothers.

In particular, Shirai (1994) set out to investigate: (a) Whether the claim that children (almost) never show over-extension of the (*-ing*) progressive marker to stative verbs is really sound; and (b) If it is, what are the characteristics that indeed prevent children from making these errors? Are children bioprogrammed or innately endowed with such a feature? To what

[33] Adam's and Eve's data are from Brown's (1973) seminal study.

extent does caretaker speech influence child language? In order to carry out such an experiment, he used objective linguistic tests to classify verb tokens. First, all the verbs produced by the children and their mothers were classified according to Vendler's four aspectual categories: states, activities, accomplishments and achievements. To distinguish statives from non-statives, each sentence was analyzed according to the following criteria: "Does the verb have a habitual interpretation in simple present tense? If so, it is non-state. If not, it is a state" (p.72)[34]. Shirai claims that most of the other tests designed to contrast statives/non-statives supplied in the literature are problematic because they involve acceptability judgements and do not always yield precise distinctions. Besides, the author notes that it is not always the case that stative sentences containing *–ing* are ungrammatical. In order to back up such statement, Shirai cites Smith (1983) who asserted that some stative verbs are indeed used by adult native speakers in the progressive to express a sense of contingency. Such a feature of English poses serious problems for the detection of incorrect attachment of the *–ing* progressive inflection on to statives, as only a subset of the actual uses of stative progressives in child language acquisition can be considered errors. In other words, how can we possibly say that a child is actually making an error when she utters 'I *am hating* the new baby-sitter'? Would we not regard the same sentence as an instance of creative use of language if uttered by an adult native-speaker of English?

> Since it is often difficult to determine which uses of stative progressives are grammatical or ungrammatical, it is not easy to determine which tokens in children's speech are examples of overgeneralization. (p. 69)

[34] Habituality is understood as involving a repetition of the same situation.

In addition, such a feature of English is problematic for the POA claim number 4, according to which overgeneralization of progressive morphology does not take place in child language acquisition. Shirai disputes the interpretation of a few studies used to give support to the state-process distinction as a universal of language acquisition (e.g., Brown, 1973; Bickerton, 1981; and Cziko & Koda, 1987), and points out that there are a few studies that have in fact showed that children do produce overextended progressive marking (e.g., Rispoli, 1990; Li, 1989).

In his analysis of the data, Shirai concluded that Adam and Eve rarely used progressive markings associated with statives, in contrast to Naomi, who produced overgeneralizations in a number of occasions. The author contends that if Bickerton's state-process hypothesis were innate, incorrect use of the progressive would not only be rare but non-existent. He also observed that while Naomi's mother often used stative progressives, the mothers of the other two children never did. Based on the evidence, Shirai further claimed that the pattern of the input that is addressed to the child determines his/her incorrect use of stative progressives. He criticizes the innateness argument by showing that when children are exposed to maternal speech, in which stative progressives are used, they are more likely to produce such sentences.

At last, after supplying evidence against Bickerton's state-process hypothesis, which makes all-or-nothing predictions, Shirai proposes a prototype explanation of the phenomena. In his view, a prototype approach would account for the fact that children seldom produce incorrect stative progressives.

> Children originally do not use morphology to its full potential as it is used in adult speech. They start with a small subset (i.e., the prototype) of the semantic category that a morphological form signifies, and only later do they acquire full potential of the morphology by extending its semantic boundary. (…) it may be argued that the prototype of progressive is 'action in progress'. If so, children are unlikely to use the progressive with stative verbs at early stages, much less to extend it to a wrong context, since such uses are far from the prototype of the progressive as a semantic category. (p. 79)

In my opinion, Li's (1989) results combined with Shirai's (1994) data provide interesting evidence that raises serious doubts regarding claim number 4 of the POA hypothesis. The least one can say is that data from other children are needed before we can make any more precise remarks about the use of progressive markings in stative sentences. With respect to the prototype explanation put forth by Shirai, I believe that a number of other aspects must be taken into consideration in the analysis before a decision about its reliability can be reached. First of all, there is the need to test more children. Second, is it really the case that children's speech is so restricted by the language input that they are exposed to? Let us recall Chomsky's (1986) 'poverty-of-the-stimulus' argument, according to which the data in the stimulus is too impoverished to justify the complexity in terms of knowledge of the language that children possess even at a very early age. Third, how can we account for the attested variability in morphology marking? In other words, if it is true that children start out with a prototype of the semantic category that a morpheme represents, and only later on in the process they acquire full potential of the morphology, how come even the three children studied by Shirai do not follow the same steps? For a prototype explanation to successfully account for the phenomena, we

would expect less variability across learners. Finally, even if we assume an interactionist view of language acquisition, we cannot forget that a child is exposed to various sources of language input and not only to his/her caretaker's speech. That is, in order to test the prototype hypothesis, an investigation of all the numerous sources of input to which a certain child is exposed is required. Unfortunately, such would not be an easy task.

In this section, I have reviewed the aspect studies that have provided evidence both for and against the POA hypothesis. I have showed that there seem to be methodological problems that prevent us from making more general claims regarding the soundness of the POA hypothesis with respect to L1 acquisition processes. First of all, the terminology adopted by the different researchers is sometimes confusing: the distinction between lexical and grammatical aspect is not always present, and not all of them adopt Vendler's verb classification. Second, some of the studies do not clearly report the criteria used to classify the verbs produced by the children. When they do, there is sometimes disagreement on the interpretation of the data from the same children. Apart from that, different tasks have been used to test children, which should originate different levels of analyses that are not always taken into consideration. In other words, I wonder whether results from comprehension tasks, elicited production tasks and spontaneous speech can possibly be interpreted on the same basis. It is important to point out at this time that Weist et al (1984) study is the only one so far to report on results from a combination of tasks. All of these aspects will be further reviewed in our discussion of L2 aspect studies presented next.

2.4 Second language studies on the acquisition of tense and aspect

As argued above, during the 1970s and 1980s, a lot of research was carried out in order to verify the presumed existence of universal patterns of development in the acquisition of verbal morphology. The identification of particular stages in the acquisition of grammatical morphemes in first language gave rise to a series of studies aiming at investigating the existence of developmental sequences in second language acquisition as well. In the last few years, however, second language acquisition research on verbal morphology has changed focus, due to the growing interest in the survey of the semantics of interlanguage systems. In other words, the studies on the distribution of early verbal morphology have shifted from the mere identification of the existence of developmental patterns to the investigation of morphological markings as the surface realization of an underlying semantic system. This particular kind of research has the goal of investigating the features responsible for the tense-aspect structure of emerging L2 temporal systems and analyzing the extent to which these features express universal categories across languages.

Bardovi-Harlig (1999) classifies the second language studies on tense-aspect into two groups: the **form-oriented studies** (also called the 'form-to-function studies'), and the **meaning-oriented studies** (also known as the 'concept-oriented approach' or the 'semantically oriented approach'). According to her, this classification was built on the basis of the different analyses put forth by each of the research groups. She claims that while the first group is mostly

interested in determining the function played by certain morphological markers in the interlanguage systems, the latter takes on a broader approach and aims to examine other linguistic devices employed by learners to express temporality. Bardovi-Harlig further points out the significant contribution of the meaning-oriented studies to the analyses of temporality relations since, in addition to the analyses of morphological markers, they also examine other linguistic and pragmatic means used by speakers to express time relations. That is, this line of investigation may take into consideration, for instance, the role of time adverbials, discourse organization, and morphology markings, as well as their interaction. Various target languages have been the focus of investigation under this approach: German, Dutch, English, Swedish, French, and Italian. For the most part, data from these target languages has been collected and examined in a cross-linguistic study sponsored by the European Science Foundation (ESF), under the guidance of Clive Perdue and Wolfgang Klein[35] (Dietrich et al., 1995). The mentioned studies have been claimed to provide evidence that the expression of temporality in Interlanguage grammars progresses in "a sequence from pragmatic to lexical to grammatical devices" and that "this progression corresponds to the use of (a) discourse principles such as chronological order and scaffolding, (b) adverbials, and (c) verbal morphology" (Bardovi-Harlig, 1999: 349-350)[36].

[35] Italian, in particular, has been studied by Giacalone Ramat (1992, 1995).

[36] For an overview of the available studies of temporality in the concept-oriented framework, see Bardovi-Harlig (1999).

It is important to note that the investigations focusing on the acquisition of aspect marking alone, for the most part, have been conducted within what Bardovi-Harlig (1999) names the 'form-oriented framework', as they predominantly examine the acquisition of verb morphology. On the other hand, authors mainly interested in time relations in a broader sense (involving both tense and aspect marking) tend to take into consideration the use of lexical and pragmatic means of expressing temporality in their analyses.

Bardovi-Harlig (1999) further divides the form-to-function analyses into two separate groups. According to her, the effects of **discourse organization** and **inherent lexical aspect** on the distribution of verbal morphology have been investigated independently. In what follows, I will examine both lines of inquiry, beginning with a report on the studies that test the effects of inherent lexical aspect on the expression of temporality marking.

As stated above, the aspect hypothesis in second language research derives from research in child first language acquisition and in creole studies. What is nowadays known as the **Primacy of Aspect Hypothesis**, or simply as the **aspect hypothesis**, has had several names and formulations over the years, depending on the kind of emphasis attributed by the different accounts to the effect of innate universals of aspectual marking on language acquisition. The **defective tense hypothesis**[37] (Weist et. al, 1984; Andersen, 1986), the hypothesis with the strongest claims, opposed inherent lexical aspect to both tense and grammatical aspect. According to its predictions, early use of verbal

[37] I discuss the 'absolute defective tense hypothesis' and the 'relative defective tense hypothesis' in section 2.2 above (see also Andersen, 1989).

morphology is constrained by the inherent aspect of predicates, rather than being guided by tense and grammatical aspect distinctions. Their advocates posit that the use of inflectional morphemes as expressions of deictic relationships emerges only at a later stage in the acquisition process. Nevertheless, because the evidence surveyed seems to favor a more relaxed approach (see the discussion in Robison, 1995a, 1995b, and Bardovi-Harlig, 1992), in the most recent version of the aspect hypothesis – presented in 2.1 above (Andersen & Shirai, 1994, 1996), a strong opposition between tense and grammatical aspect distinctions on the one hand, and inherent lexical aspect on the other is no longer claimed. Yet, the influence of the lexical aspect of verbs on the distribution of early verbal morphology is still maintained.

> It has been consistently observed that L1 and L2 learners, in the early stages of acquiring verbal morphology, use tense-aspect markers selectively according to the inherent lexical aspect of the verb to which the tense-aspect marker is attached or with which it is associated. (Andersen & Shirai, 1996: 529)

In a similar manner, Robison (1990) states that

> when L2 verb morphemes enter the interlanguage of an adult language learner, they are not uniformly distributed across all verbs, but, rather as in L1 acquisition, may be distributed according to the lexical aspectual classes of verbs. Thus, morphemes that mark tense or grammatical aspect in the L2 may be drafted to redundantly mark lexical aspect in the interlanguage. (Robison, 1990: 329)

Two types of L2 studies are argued to have provided evidence that learners employ verbal inflections to mark aspectual distinctions in non-native-like manners. The first analyses to bring support for the aspect hypothesis in L2 acquisition were a few case studies developed during the 1980s. Untutored

adult ESL learners were investigated by Kumpf (1982) (Spanish L1), Kumpf (1984) (Japanese L1), Flashner (1989) (Russian L1), and Robison (1990) (Spanish L1). Andersen (1986, 1991) also reports on a case study, but, unlike others that analyzed adult speech, he investigated 2 English-speaking children learning Spanish as an L2[38].

More recently, cross-sectional studies have become more frequent due to a growing concern with the development of quantitative analyses as well as qualitative discussions. In addition, the range of target languages investigated has increased significantly and instructed learners have also been surveyed. Analyses of French (Bergström, 1995; Bardovi-Harlig & Bergström, 1996; Salaberry, 1998) and Spanish (Hasbún, 1995; Ramsay, 1990) as foreign languages, ESL in either host (Bardovi-Harlig, 1992; Bardovi-Harlig & Reynolds, 1995; Bardovi-Harlig & Bergström, 1996; Shirai, 1994; Shirai & Kurono, 1998) or bilingual environments (Collins, 1997) have provided additional evidence for the aspect hypothesis. Oral and written narratives, written cloze passages and judgement tasks have been used to elicit data.

Regarding the different verb classifications found in the studies, although some authors have employed binary aspectual divisions (stative X dynamic, telic X atelic, punctual X durative), in the majority of cases, researchers have followed Vendler's (1957) fourfold framework and have classified verbs into statives, activities, accomplishments and achievements. In addition to that, operational tests (mainly following Vendler, 1957; Dowty, 1979;

[38] See also unpublished work by Andersen's students (Andersen, 1991, presents a detailed review of the most interesting results).

Smith, 1991, 1997) have lately been more often used in order to contribute to a more precise analysis of the evidence (Robison, 1990, 1995a; Shirai, 1995; Bardovi-Harlig & Bergström , 1996, among others).

It is now time to introduce the main results of L2 studies on aspect. Let us first recall the claims postulated by the advocates of the aspect hypothesis (already discussed in 2.1 above). On the level of description, the hypothesis predicts the following sequences for the spreading of verbal morphology:

1. Children first use past marking (e.g., English) or perfective marking (Chinese, Spanish, etc.) on achievement and accomplishment verbs, eventually extending its use to activity and stative verbs.

2. In languages that encode the perfective-imperfective distinction, imperfective past appears later than perfective past, and imperfect past marking begins with stative verbs and activity verbs, then extending to accomplishments and achievement verbs.

3. In languages that have progressive aspect, progressive marking begins with activity verbs, then extends to accomplishment and achievement verbs.

4. Progressive markings are not incorrectly overextended to stative verbs.

(Andersen & Shirai, 1996: 533)

For ease of exposition, I will organize the presentation of the second language studies according to the specific POA claim that they supposedly examine. In particular, I will discuss (a) the association between perfective aspect and events – achievement and accomplishment verbs; (b) the correlation between imperfective aspect and statives; (c) the association of

progressive aspect with activity verbs; (d) the over-extension of progressive aspect to stative verbs; and, finally, (e) possible counter-evidence to the aspect hypothesis. For a summary of the main features of each study, see Table 6.

Table 6: Empirical L2 studies on the acquisition of aspect and tense

Target language	Author	L1	N	Design	Analysis
Catalan	Comajoan (1998)	English	1	Longitudinal, conversational interview, and oral story/film retells	Vendler categories
Dutch	Housen (1994)	English	1	Longitudinal, 2 samples 1 year apart; guided conversations	Stative/dynamic durative/punctual
English	Kumpf (1984)	Japanese	1	Conversational interview	Stative/active
	Flashner (1989)	Russian	3	Personal narratives spontaneous speech	Perfective/ imperfective
	Robison (1990)	Spanish	1	Conversational interview	Stative/dynamic durative/punctual
	Bayley (1991, 1994)	Chinese	20	Cross-sectional, personal narratives	Perfective/ imperfective
	Bardovi-Harlig (1992)	Mixed	135	Cross-sectional, cloze passages	Vendler
	Bardovi-Harlig & Reynolds (1995)	Mixed	182	Cross-sectional, short cloze passages	Vendler
	Robison (1995)	Spanish	26	Cross-sectional, conversational interview	Vendler, punctual activity & punctual state
	Bardovi-Harlig & Bergström (1996)	Mixed	20	Cross-sectional, written narratives (film retell)	Vendler
	Rohde (1996)	German	2	Longitudinal, spontaneous speech	Vendler
	Collins (1997)	French	70	Cross-sectional, short cloze passages	Vendler
	Bardovi-Harlig (1998)	Mixed	37	Cross-sectional written and oral narratives (film retell)	Vendler
French	Kaplan (1987)	English	16	Cross-sectional, semi-structured, 10-min. interviews	Perfective/ imperfective

	Bergström (1995, 1997)	English	118	Cross-sectional, written narratives (film retell) & cloze passage	Vendler
	Bardovi-Harlig & Bergström (1996)	English	20	Cross-sectional, written narratives (film retell)	Vendler
	Salaberry (1998)	English	39	Multiple choice, written narratives (film retell) & cloze passage	Vendler
Italian	Giacalone Ramat & Banfi (1990)	Chinese	4	Longitudinal, conversational interview	Perfective/ imperfective
	Giacalone Ramat (1995, 1997)	Mixed	20	4 cross-sectional and 16 longitudinal, conversational interview (oral narratives, film retell, description of picture stories)	Vendler and mental states
Japanese	Shirai (1995)	Chinese	3	Conversational interview at 8 months in Japan	Vendler
	Shirai & Kurono (1998)	Mixed	17	Judgement task at 3, 6, 9 months in Japan	Vendler
Spanish	Andersen (1986)	English	1	Longitudinal, 2 years, 2 conversational samples	Vendler
	Andersen (1991)	English	2	Longitudinal, 2 years, 2 conversational samples	Vendler
	Ramsay (1990)	English	30	Cross-sectional, oral retell of picture book	States, activities, events
	Martínez Baztán (1994)	English	15	Advanced learners, 2 compositions per learner	Vendler, error analysis
	Hasbún (1995)	English	80	Cross-sectional, written narratives (film retell)	Vendler
	Lafford (1996)	English	13	Cross-sectional, oral narratives (film retell)	Telic/ atelic
	Liskin-Gasparro (1997)	English	8	Advanced learners oral narratives (film retell); retrospection	Vendler
	Salaberry (1997)	English	16	Cross-sectional, oral narratives (film retell), grammar test, cloze test, and editing task	Vendler

(adapted from Bardovi-Harlig, 1999: 354-356)

(a) The association between perfective aspect and achievement / accomplishment verbs

It may be asserted that this is the prediction for which more robust evidence has been provided in the literature. According to the defenders of the aspect hypothesis, beginning L2 learners show a higher incidence of attachment of the perfective inflection to achievement and accomplishment verbs than to verbs belonging to the other two classes (activities and statives). Bardovi-Harlig (1999) points out that the strong evidence supporting this stage probably results from two factors: first, most of the aspect studies report on narrative production data and there seems to be a high incidence of achievements in this kind of production task; second, the past morpheme is apparently the first one to be acquired. Evidence for the spread of perfective claim has been found in the case of English as a second language (Bayley, 1991; Robison, 1990, 1995a, 1995b; Bardovi-Harlig & Reynolds, 1995; Bardovi-Harlig & Bergström, 1996; Bardovi-Harlig, 1992, 1998; Rohde, 1996; Collins, 1997), Spanish (Andersen, 1986, 1991; Ramsay, 1990; Hasbún, 1995), Japanese (Shirai, 1995; Shirai & Kurono, 1998), Catalan (Comajoan, 1998), Dutch (Housen, 1993, 1994), French (Bardovi-Harlig & Bergström, 1996; Salaberry, 1998b), and Italian (Giacalone Ramat, 1995), among others. In what follows, I will discuss some of the most interesting findings reported in the literature.

Only very few studies have tested the predictions of the POA in English through controlled tasks. They are Bardovi-Harlig (1992), Bardovi-Harlig

& Reynolds (1995), and Collins (1997). Employing cross-sectional designs, Bardovi-Harlig (1992) and Bardovi-Harlig & Reynolds (1995) used cloze passages to assess English learners from various L1 backgrounds on the use of inflections. Bardovi-Harlig (1992) assessed 135 classroom adult learners at 6 levels of proficiency, using a cloze test that contained contexts in which expressions with past time reference had to be used. The same groups of subjects were also asked to write a composition. The author found that the three punctual verbs were used in the simple past at a higher rate than the three durative verbs.

Backed up by some cautionary remarks in Meisel (1987), who maintains that the use of inflections to mark aspectual distinctions in SLA may be a "marginal phenomena" (Meisel, 1987: 220), limited to certain learners, Bardovi-Harlig (1992) was wary about interpreting her findings as support for the aspect hypothesis. Furthermore, she reports that her learners also marked tense fairly consistently across aspectual classes, and the level of formal accuracy was quite high. In analyzing these results, Bardovi-Harlig & Reynolds (1995) call our attention to the small number of verbs tested (3 activities and 2 achievements). Although the total number of subjects tested was high (n = 135), they say that the small number of verbs tested prevents us from interpreting the evidence as endorsing the aspect hypothesis.

A reexamination of Bardovi-Harlig's (1992) data has been offered by Andersen & Shirai (1996). In their view, the most relevant information to be considered is the fact that the elementary learners in the study had a lot more

difficulty in supplying past inflections in obligatory contexts in the case of stative and activity verbs than of achievement verbs. Moreover, they say, "even when incorrect markings of pastness (…) are included, the trend remains the same, although in a less dramatic way" (p. 546).

Bardovi-Harlig & Reynolds (1995)[39] tested 182 adult ESL learners from 15 native language backgrounds, divided into 6 distinct levels. Employing a cloze test composed of 32 short passages containing 62 target items in the simple past (14 achievements, 11 accomplishments, 12 activities and 10 states were included). According to them, the acquisition of the English past tense does not occur simultaneously in all contexts, but rather proceeds in stages, which are in turn determined by the meaning of verbs insofar as they express relations of action and time (i.e., lexical aspect). The authors claim to have found proof of the influence of lexical aspectual features on the acquisition of the past tense in English. At all 6 levels of English proficiency, learners show a higher correlation of use of past inflections with event verbs than with statives or activities. On the other hand, subjects also demonstrated a weaker link of past morphology with achievements and accomplishments with increasing level of proficiency. They conclude by saying that "the results indicate that lexical aspectual class influences the use of simple past tense on this task. They further indicate that level of proficiency influences tense use" (1995: 114).

Bardovi-Harlig & Bergström (1996) analyzed the written narratives of two groups of subjects in a story-retell task. All subjects tested (23 English as a

[39] See also Collins (1997), who replicated Bardovi-Harlig & Reynolds' (1995) study.

second language learners and 23 French as a foreign language learners) had had some formal instruction on the language they were learning. The task consisted in watching an eight-minute excerpt from a movie and retelling the story in writing within 50 minutes. With respect to the presumed association between past morphology and event verbs, their results indicate that "in both English and French, past spreads from telic verbs (achievements and accomplishments) to activities" (p. 316), revealing that lexical aspect has an effect on the distribution of verbal morphology in SLA.

Some interesting facts about the study should be pointed out. The authors themselves call our attention to some of its strengths and weaknesses. In their view, the number of subjects tested (*n* = 46) was large, and the sample was substantial (1525 verb tokens). Besides, the same task was used to test individuals from two target languages. However, the kind of data collection adopted – a narrative task – generates one of the study's main limitations: the number of verbs across aspectual categories is not balanced. First, achievement verbs far outnumbered the verbs in the other three classes, and second, the use of stative verbs was rather limited (*be* being the most widely used). This problem makes it very difficult to interpret naturalistic production data and, as I will discuss in the next chapter, it is one of the reasons why I adopt more controlled tasks to elicit data in the present study. Another problem that can be detected in Bardovi-Harlig & Bergström's (1996) study is the fact that a reliable proficiency test was not available. The subjects were classified according to "their rates of appropriate use of tense" (p. 324), which consequently yielded an uneven number of subjects in each of the groups.

Moreover, in spite of their claim that the number of participants in the study was large, a closer analysis of their data reveals that the number of learners in each of the groups was actually very small (between 4 and 7). The question to be raised now is, considering the limited number of subjects tested in each group, how reliable can the authors' conclusions be?

Bardovi-Harlig (1998) analyzed cross-sectional oral and written data from 51 ESL classroom learners. She used the same eight-minute movie excerpt as in Bardovi-Harlig & Bergström (1996). Learners saw the movie segment twice and were allowed to ask questions about it. After that, each participant was asked to retell the story orally. Later in the day, they were given 50 minutes to write a composition about the movie. Based on the percentage of correct use of past inflections, learners were then placed into four groups, containing between 3 and 6 members, from five different L1s. A subset of 37 pairs of narratives (74 in total) was chosen for the analysis. Both the oral and written narratives appear to furnish support for the aspect hypothesis – i.e., correlation of past with events, the main difference between the two sets of data being the pattern presented in the case of achievement and accomplishment verbs. That is, in the written data, achievements and accomplishments pattern together, whereas the oral data indicates a significant higher use of achievement verbs (up to 30%) in comparison to accomplishment verbs in the simple past tense. Bardovi-Harlig (1998) claims that the oral data reinforces Andersen (1986, 1991), who has found distinct patterns of development for achievement and accomplishment predicates in Spanish acquisition.

Some facts deserve further consideration. First, when we take a closer look at Bardovi-Harlig's (1998) presentation of the data (see, in particular Table 2, on p. 483), we can see that almost 50% of all verb tokens in the sample are achievement verbs. In other words, the data presents a serious imbalance across aspectual classes, which probably results from the kind of eliciting method adopted in the investigation. It is hard to know for sure to what extent this fact interferes with results. However, as I have already argued, this is a problem that can easily be avoided once we choose more controlled methods of data collection.

A further problem is that *be* is the most widely used stative verb in the sample: "*be* accounts for 75% of all past tense use among statives in the written sample and 89% in the oral sample" (1998: 484). Because *be* has been analyzed as a tense marker as well as an aspect marker by some authors (e.g., Giacalone Ramat, 1992), its occurrences were not considered in the analysis, causing an even greater imbalance among the aspectual categories.

In his longitudinal investigation of Rogelio, a Spanish native-speaker learning ESL, Robison (1990) analyzed two aspectual distinctions: the stative-dynamic contrast and the punctual-durative contrast. Since the data was collected during oral interviews, the learner did not produce an even number of verbs from each of the aspectual classes. In spite of that, Robison did interpret the results as confirmatory evidence for the POA, as his subject showed a strong link between the use of past inflection and punctual verbs as well as the use of progressive marking (-ing) and durative verbs. Robison's learner,

however, also demonstrated a high percentage of over-extension of the progressive marking onto stative verbs, contrary to what is predicted by claim number 4 of the POA hypothesis.

Robison (1995a) also presents some interesting findings[40]. Through the analysis of 30 to 60-minute oral interviews with 26 Puerto Rican college students (grouped into 4 levels of English proficiency), he tested the correlation of inflections with tense and aspect. It is important to note that, due to the kind of task that was applied, the overall use of past tense was not uniformly distributed across all four lexical aspectual categories. Nevertheless, Robison demonstrates that the highest percentage of past tense inflection did occur with achievement verbs in all four proficiency levels, even though there was a clear regression of this trend in the data from groups three and four. Accordingly, Robison states that "lexical aspect exerted more control over inflection than tense: the lowest-level group evidenced a stronger attachment of (…) PAST to punctual events than to anterior reference" (1995a: 365).

The last English study to be reported in the present section is the one developed by Rohde (1996), who investigated two German children acquiring ESL in the United States in a natural setting. At the time of data collection, one child was nine and the other was six years old. The author analyzed the children's speech that was recorded on a day-to-day basis for a period of five months. In search for the occurrence of distinct stages of development, the data was analyzed separately for each month. With respect to the spreading of past

[40] It is worth noting that to Vendler's (1957) four-way classification, Robison (1995a) adds two categories: 'punctual activities' and 'punctual states'.

verb morphology, Rohde observes that "the results of this study show a distributional bias for both regular and irregular past inflection in the learner's data. In other words, most of the verbs inflected for past tense are achievements" (1996: 1129).

L2 French was studied by Kaplan (1987), Bardovi-Harlig & Bergström (1996) and by Salaberry (1998a, 1998b). Kaplan (1987) analyzed the speech of 16 classroom learners of French and found that perfective past correlated with telic events, while the present form was associated with atelic events. Bardovi-Harlig & Bergström's (1996) findings have been presented above. Salaberry (1998a) investigated the performance of 39 English-speaking college students enrolled in a second semester French course. In addition, 30 French native-speakers were selected to compose a control group. Two tasks were designed: a discourse-based cloze test (containing 41 items) and a written narrative of a six-minute movie. It is interesting to note that, in the written task, the two groups of participants used mostly past tense inflections (1200 tokens in total). The great majority of verbs used in the past tense (*passé composé*) by both groups belongs to the achievement class (55% in the case of non-native speakers and 59% in the case of native speakers). The results from the cloze test reveal a pattern that is similar to what was found in the written narrative. Particularly intriguing in Salaberry's (1998a) study is the conclusion she draws from her data. According to her, the data demonstrated that

> classroom instruction may increase the rate of development of the prototypical value of past tense aspectual marking by the end of the second semester of instruction, and the lack of access to L2 discursive-

> pragmatic conditions (academic instruction only) may delay the acquisition of viewpoint aspect. (1998b: 112)

It is quite difficult to understand, however, what empirical justification there may exist for the position defended by the author. In other words, how can she claim that classroom instruction affects the rate of development of French past tense morphology on the basis of such scarce evidence? A comparison between results of classroom and non-instructed learners would have to be pursued here.

Both Shirai (1995) and Shirai & Kurono (1998) have tested the aspect hypothesis in the acquisition of L2 Japanese. Shirai (1995) and Shirai & Kurono (1998) report on the analysis of oral interviews of 3 Chinese subjects who had had intensive classroom instruction for 7 months in Japan. The subjects tested showed a strong tendency to employ the past marker in achievement verbs, in opposition to native speakers, who linked the past morpheme more evenly to all classes of verbs.

Dutch as a second language was surveyed by Housen (1994). He collected longitudinal oral data from an adult English native speaker subject who had classroom instruction in the US and also experienced some informal contact with native speakers both in Holland and in the US. The analyses were based on two 90-minute recordings of free conversation, one year apart from each other. In particular, the author tested the stative X dynamic and the durative X punctual distinctions. He found that

> in the earliest stages of development, past tense morphemes first appeared on certain punctual and/or

> dynamic verbs in past time-sphere contexts only.(…) Gradually, past tense morphology spread along the punctual-durative and stative-dynamic continua, first among the remaining punctual and dynamic verbs before also reaching the more durative and stative ones. (p. 274)

It could be argued that these findings are in line with the aspect hypothesis. Nevertheless, Housen (1994) appears to be aware of the limitations of his study due to the "qualitatively and quantitatively limited nature of the corpus" (1994: 282), not to mention other problematic aspects, such as the imprecise verb classification that was used.

Giacalone Ramat (1995) tested the so-called 'acquisitional sequence' of morphological encoding of temporal and modal distinctions that learners presumably follow when learning Italian as an L2. According to her predictions, learners generally pass through the following stages: present>(aux+)past participle>imperfect>future. Subjects from various L1 backgrounds participated in the study. Longitudinal data from conversational speech, picture descriptions, and film retells were used in the analysis. The author claims that

> the data on the acquisition of Italian as a second language collected within a research project coordinated by the University of Pavia do not fully support the Defective Tense Hypothesis, but do not provide conclusive evidence either for the assumption that verbal morphology initially encodes only tense distinctions (p. 294).

According to Giacalone Ramat (1995), the analysis of the data provides support for the following: (a) initially, learners predominantly use the 'basic' unmarked form of the present tense, which reveals that no aspect/tense marking is employed in the beginning of acquisition; (b) when past participles

appear, they are associated with “punctual verbs and telic verbs with some duration, but a clear terminal point” and “ in situations viewed in their entirety, without regard to internal temporal constituency” (p. 295). Giacalone Ramat concludes that even though the evidence furnishes support for the general claim that “past participles encode perfective aspect” (p. 295), it goes against the predictions that only achievements and accomplishments are inflected for perfective in the beginning of acquisition.

Giacalone Ramat’s study contains so many methodological problems as to render her conclusions unreliable. First of all, there are problems regarding participants. There seems to be a strong variation among learners with respect to proficiency level, age (children and adults appear together), date of arrival in Italy, time and quality of classroom instruction, age, exposure to native language, and interaction with native speakers. That is, none of these factors were controlled for. Her testing instruments and length of data collection also vary enormously among participants. The author does not report clearly the number of subjects that participated in her study and what kinds of data samples were used in the analysis reported. She claims that her study belongs to a larger project developed at University of Pavia, but her paper lacks clarity with respect to many details of her own study.

The most interesting investigations about the acquisition of Spanish were developed by Andersen (1986, 1991), and Ramsay (1990). They report to have found a strong link between the *preterit* inflection and punctual verbs (achievements) in the beginning of the process. Andersen has argued that the

past perfective inflection emerges in the following developmental order: achievements → accomplishments → activities → states. Ramsay observes that her 30 classroom subjects behaved in a similar way. The author further demonstrates that even upper-intermediate students, who used both perfective and imperfective past inflections with verbs in all four categories, still applied the perfective inflection to achievements, as well as imperfective to non-punctual verbs more often than not.

(b) The development of the imperfective aspect

It has been consistently attested in the literature that imperfective aspectual marking emerges after perfective marking in language acquisition: Andersen (1991) reports that *preterit* past emerges before *imperfect* in the acquisition of Spanish; Kaplan (1987) states that French *passé composé* emerges before the *imparfait*; and, finally, Giacalone Ramat (1995) shows similar results for the learning of Italian. Researchers testing the aspect hypothesis predictions have been particularly interested in the stages that learners supposedly follow in the process.

In the case of Spanish as a second language, Andersen (1986, 1991) found a strong correlation of past imperfective morphology with state and activity verbs. As discussed above, Andersen showed that perfective past appears before imperfective and presented the following order of emergency of imperfective past: state → activity → accomplishment → achievement. A similar sequence of acquisition has also been reported for French as an L2 by

Bergström (1995). In a cross-sectional analysis of written narratives from 117 learners, the cited author revealed that the first occurrences of imperfect are with states (second-year students), spreading then to activities (third-year students).

In the investigation of Italian as a second language, Giacalone Ramat (1995) found that the past participle form of the verbs (the first marked form to appear in acquisition) is not generally employed to mark imperfective past. She states that the unmarked present form and later the imperfect are used instead (p. 297). Apart from that, she also argues that imperfective emerges at a later stage in the process, i.e., after perfective markings have been acquired, as predicted by the 'acquisitional sequence' of tense and aspect marking in Italian as an L2 (discussed above). It is, however, worth pointing out that Giacalone Ramat's (1995) study presents some serious methodological flaws that render her observations unreliable (for some of the criticisms against her study, see above).

Interestingly, the target-language imperfect forms are not the first markers of imperfectivity to emerge. It has been assumed that the present form is indeed a 'base' form in the case of Italian (Giacalone Ramat, 1995), and French (Kaplan, 1987). Bardovi-Harlig & Reynolds (1995) and Robison (1995) have also posited a base form being employed in the case of English statives. In his analysis of Dutch as a second language, Housen (1994) reports a significant correlation between the use of a present or base form and stative verbs.

Bardovi-Harlig (1999) calls our attention to the very limited number of stative verbs present in most studies, in comparison to the high incidence of verbs from other classes[41]. Consequently, it becomes particularly difficult to observe the presumed stages in the acquisition of the imperfective.

(c) The supposed association of progressive aspect with activity verbs

In the case of second learners of English, evidence for the above claim has been provided in a number of cross-sectional studies: Robison (1995a) analyzed oral narratives; Bardovi-Harlig & Reynolds (1995), and Collins (1997) tested written cloze passages; Bardovi-Harlig & Bergström (1996) analyzed written narratives; and Bardovi-Harlig (1998) investigated oral and written narratives. All the authors just cited claimed to have found evidence that, among ESL learners, the *-ing* progressive marker strongly correlates with activity verbs.

Bardovi-Harlig & Reynolds' (1995) subjects demonstrated a higher use of the *-ing* inflection with activity verbs than with verbs from any other aspectual class. In their investigation of instructed learners of English and French through a written story-retell task, Bardovi-Harlig & Bergström (1996) found that both beginning and intermediate learners showed a higher production rate of the progressive morpheme with activities, in comparison to verbs from other classes. Bardovi-Harlig (1998) investigated cross-sectional oral and written data from 51 ESL classroom learners and found similar results.

[41] Verbs belonging to the achievement category are the most common ones in narrative studies.

With respect to the spread of the progressive, Robison (1995a) has the most interesting results. In his analysis of 26 Puerto Rican English learners, he found that higher-level learners exhibit a stronger affiliation of the progressive marker with activity verbs than lower-level learners, a pattern that challenges the POA hypothesis predictions.

> The affiliation of inflection with lexical aspect also strengthens with increasing proficiency. Progressives, in particular, become more narrowly focused on activities with rising level. (p. 365)

Evidence for the strong association of progressive marking with activity verbs in the case of Italian as a second language is found in Giacalone Ramat (1997). Referring to data from 12 learners, the author argues that 63% of all the progressive occurrences appear with activities, whereas 21.5% appear with what she calls 'mental states' (verbs such as *credere* 'believe', and *pensare* 'think'), 3.3% with states, 8% with accomplishments, and 4% with achievements (p. 278).

Apart from the data discussed earlier regarding Japanese past tense markings, Shirai & Kurono (1998) also present evidence for the second claim of the aspect hypothesis from 17 learners of Japanese from various L1 backgrounds in a longitudinal study employing acceptability judgement tests. They say that their subjects found it easier to recognize the correct uses of the progressive *–te i-* in sentences in which the morpheme was attached to activity verbs than when it was associated with achievement verbs.

(d) The over-extension of progressive aspect onto states

Data pertaining to the use of the progressive *–ing* marker is perhaps the most interesting for our analysis since results are somewhat different from what has been discussed for first language acquisition. A large number of researchers have concluded that over-extension of the *–ing* morpheme may indeed occur in the case of second language learners. Transfer from the learners' native language has been one of the explanations presented by the authors for such a phenomenon. This specific account and others will be discussed under 2.4 below.

Analyses regarding the use of progressive marking in the case of ESL are found in case studies (Robison, 1990; Flashner, 1989; Rohde, 1996) and in cross-sectional studies involving classroom learners (Robison, 1995a; Bardovi-Harlig & Bergström, 1996; Bardovi-Harlig & Reynolds, 1995; Collins, 1997; Bardovi-Harlig, 1998). Robison's (1990) untutored English learner demonstrate the highest rate of over-use of progressive morphology onto stative predicates that I am aware of. Robison's tables show that 22% of all statives produced by his subject appeared with the progressive morpheme (i.e., 39 out of 176 tokens). Another important result is the fact that 47% of all the verbs that appear in the progressive are stative predicates (i.e., 39 out of 83) (p.325). Conversely, none of Flashner's (1989) three Russian subjects learning ESL affiliated progressive morphology with stative verbs. In the same way, in his study of two untutored child learners of English, Rohde (1996) informs of only four occurrences of the progressive inflection with stative predicates in the

early stages, although the total number of predicates produced by the children is not provided.

In the case of instructed learners, most studies have reported null or very low use of progressive with statives. Results for narrative data are as follows. Robison (1995a) claims that "the progressive is consistently scarce among states across all four levels" (p. 359). Bardovi-Harlig & Bergström (1996) observed only one occurrence of overgeneralization of progressive with stative verbs (in their Group 4) (p. 316). Equally, Bardovi-Harlig, (1998) found only 2 occurrences of progressive statives in her written narrative data, and none in her oral narrative data[42].

As to cloze passages, the number of occurrences of progressive statives is a little higher than in narratives. For instance, Bardovi-Harlig & Reynolds (1995) found that "state verbs show a modest use of progressive in Level 1 (7.3% of the responses), but this is only one third the use of progressive (24.6%) found in activity verbs at the same level of proficiency" (p.117). In a similar manner, Collins (1997) reports a high of 9%.

With reference to Italian, Giacalone Ramat (1997) shows a very low rate of overgeneralization of the progressive inflection. The cited author reports a total of 3.3% in the distribution of progressive forms with statives (5 occurrences in a total of 143 verb tokens). Shirai (1995) and Shirai & Kurono (1998) give similar results for Japanese as a second language. In their analysis

[42] It is important to note, however, that very few stative predicates were produced by her subjects (64 statives in 1,462 verb tokens in the oral narratives (4.4%), and 226 statives in 1,318 verb tones in the written narratives. (17%)).

of oral interviews of 3 Chinese subjects who had experienced classroom instruction in Japan, they claim to have found the progressive *–te i-* in stative predicates in only 2% of the total verb tokens[43].

Since the number of progressive statives appears to be a little higher in cloze passages than in narrative tasks, it could be argued that the kinds of tasks used to test the POA may exert some influence on the results. In any case, most studies have showed that it is the case that learners do not seem to over-generalize the progressive inflection at a very high rate, although some over-extension may occur. For the moment, I maintain that the picture seems inconclusive in this regard.

In sum, nearly all second language acquisition studies on verbal aspect reported so far appear to generally accord with most of the POA predictions. Next, I will review the evidence that has been used to doubt the universality of the aspect hypothesis.

(e) Possible counter-evidence to the aspect hypothesis

An interlanguage system in which emergence of verbal morphology occurred simultaneously with all four aspectual classes would posit unequivocal evidence against the aspect hypothesis. In other words, if it is the case that verbal aspect is not marked prior to tense distinctions in language development,

[43] Interestingly, Shirai (1995) and Shirai & Kurono (1998) found a higher use of progressive morphology with statives in the case of their two native-speakers (3% and 4%), in comparison to their non-native-speaker subjects.

then the first occurrences of simple past, for instance, would involve the use of the perfective inflection (*-ed* in the case of English) equally across states, activities, accomplishments and achievements. The same reasoning applies to all the other tenses as they emerge.

I am not aware of any study that presents claims as strong as the ones just presented. Rather, as I will show next, likely counter-evidence to the aspect hypothesis seems to derive from findings regarding particular predictions put forth by the aspect hypothesis.

The first problematic findings to be discussed here are the ones introduced by Kumpf[44](1984). Her subject, an uninstructed Japanese learner of ESL named 'Tamiko', used past tense markers with stative verbs more often than with non-statives, demonstrating a pattern that clearly goes against the aspect predictions. It is worth noting, however, that most of the past-marked statives that the informant used were instances of *be*. Besides, out of the 37 clear cases of past tense morphology on statives, a total of 33 were clear cases of copula, and 1 was an instance of *used to* (past habitual). In addition, the learner produced 18 tokens of base forms (i.e., failure to attach past inflection in past time contexts), compared to only 3 cases of regular past tense forms.

As a consequence, Kumpf's results have consistently been disputed as counter-evidence to the aspect hypothesis. Shirai & Kurono (1998), for instance, have argued that the learner's "inflectional past-marking on verbs was

[44] Apart from the aspect hypothesis, Kumpf's (1984) investigation was also designed with the purpose of testing the discourse notions of 'foreground' and 'background'. Due to the scope of this essay, I will not supply further discussion of these definitions here.

basically missing" (p. 270), therefore preventing us from arriving at any solid conclusion regarding the applicability of the aspect hypothesis. Following a similar path, Bardovi-Harlig (1999) maintains that

> Reanalysis of Kumpf's learner – like the learners in Schumann's (1987) study who also showed no correlation of inherent aspect and verbal morphology – may have been at too low a level to show productive use of verbal morphology. (p. 363)

Meisel (1987) furnishes apparent manifestation against the POA as well. The author contends that even though a first look at some of his data seemed to provide support for the aspect hypothesis, "a more careful analysis, however, revealed that learners do not systematically use an aspectual system" (p. 220). Meisel objects to the allegation that aspect exerts a systematic influence on language development and advocates that its effects may well be learner-specific.

> My guess is that aspectual notions play a marginal role in the development of L2 interlanguages. They may be used occasionally, just as standard languages with temporal systems do, in some instances, make use of aspectual notions. (p. 220)

Andersen & Shirai (1996) dispute Meisel's (1987) allegations by declaring that "his study had a very different framework, and does not constitute a problem for the claim of POA" (p. 546). They based this assertion on the fact that Meisel's study aimed at analyzing the way general past time reference is encoded in interlanguage, and that other past-time devices, such as adverbials, were included in the analysis.

Rhode (1996) presents what can be defined as the most serious problem for the aspect hypothesis contenders. In his investigation of two German children acquiring ESL in a natural setting, Rhode observed that, from the very beginning, the two children attached the progressive inflection to both activity and achievement verbs and did not demonstrate a distributional bias, as it was expected. That is, the two children demonstrated a high correlation of progressive *–ing* with achievement verbs, rather than with activity verbs, contradicting the prediction regarding the spreading of the *–ing* inflection.

The identification of Rhode's findings as evidence against the POA is not consensual. To illustrate, according to Bardovi-Harlig (1999), a closer look at Rhode's data reveals that, in the case of the six-year-old data,

> when the raw scores are converted into percentages of verbs in each aspectual category, the use of progressive, even at its highest, neither meets nor exceeds the use of past (…) with achievements (i.e., 37% progressive to 56% past) and, moreover, 91% of the activities with verbal morphology carry progressive. (p. 363)

Bardovi-Harlig further claims that a similar trend can be found in the results from the nine-year-old. That is, when percentages are considered, the number of achievements that received past inflection is greater than the number of achievements associated with progressive. Besides, Rhode himself admits that very often the progressive inflection was used to denote immediate future, as in the utterance *Mami, when are you leaving?* (p. 1131). Because this use of the *–ing* morpheme is very different from the employment of the *–ing* inflection to mark activities in present and past-time contexts than has been reported for other learners, this issue requires further examination.

Finally, another seeming counter-example is Robison (1995a). His lower-level subjects (six learners) showed an unpredicted greater association of progressive with punctual events than with activities, an association that decreases dramatically with increasing proficiency. Since most of these uses of progressive were cases of *going to*, Robison himself did not treat these results as problematic for the aspect predictions.

In conclusion, the studies that were reported here have dealt with adult and children L2 learners, in both naturalistic and classroom L2 environment, using naturalistic and controlled data collection methods. Most studies survey the acquisition of English as an L2, although some other languages have been analyzed as well. Most of the findings presented so far are compatible with the suggestion that lexical aspect markings emerge earlier than tense markings in both child and adult L2 acquisition, the main exceptions being a few isolated potential counterexamples introduced by Kumpf (1984), Meisel (1987), Rhode (1996), and Robison (1995a). At the same time, it is interesting to point out that most of the studies reviewed here that present evidence for the aspect claim have been conducted with the help of naturalistic and therefore uncontrolled methods of data collection, an issue to which I will come back in Chapter 3.

2.5 Explanations for variability in the acquisition of aspectual distinctions

A great number of studies in both L1 and L2 acquisition indicate support for the POA predictions. In particular, perfective past inflections were generally found to correlate with punctual and/or telic predicates; imperfective appears to first emerge in states and then to spread to activities; the *-ing* progressive marker initially occurs associated with activities and spreads slowly to accomplishments and achievements. The specific prediction concerning the nonexistence of stative progressives seems to be the most problematic one due to some contradictory evidence reported by the authors.

Until now, I have provided a description of a number of investigations in which the effects of verbal aspect in the acquisition of verbal morphology by first and second language learners were analyzed. My goal in this section is to critically discuss the explanations that have been introduced in the literature for the aspect data.

Working within the Piagetian framework, Antinucci & Miller (1976) and Bronckart & Sinclair (1973) reported that the children they tested did not possess the concept of temporal deixis, therefore employing verbal morphology to mark aspectual rather than tense distinctions. As explained in 2.3, they have attributed the influence of verbal aspect on the distribution of morphology to a supposed cognitive inability of very young children to mark verbs with appropriate adult-like tense distinctions. Nevertheless, an unequivocal problem with a **cognitive-deficit explanation** for early use of inflectional morphology, as

the one given by Bronckart & Sinclair (1973) and Antinucci & Miller (1976), is that it does not provide a viable explanation for what takes place in adult second language acquisition.

On the basis of the evidence presented by Bronckart & Sinclair, and Antinucci & Miller, as well as on his investigations on pidgin and creole languages, Bickerton (1981) maintains that the distribution of verb types by learners is guided by a set of innate linguistic universals. Under this view, these cognitive universals determine that aspectual features be more prominent than tense distinctions, consequently influencing learners to initially link emerging inflections to internal aspectual categories, and only later shift to a more native-like distribution. This approach has been called Bickerton's **Bioprogram Hypothesis**.

A distributional bias in the input directed to the learner has also been suggested as a possible explanation for the findings reported in the preceding sections. The proponents of the so-called **Distributional Bias Hypothesis** – from now on, 'DBH' – (Andersen, 1989, 1993; Andersen & Shirai, 1994; Shirai, 1994) have tried to demonstrate that the patterns displayed by learners (or children, in the case of L1A) during the acquisition process of verbal morphology are influenced by a distributional bias in the language addressed to the learner or child. In other words, according to this view, learners (as well as children) utilize verbal aspect selectively in terms of aspectual classes as a consequence of the fact that native speakers also follow the aspect hypothesis. As Andersen (1993) puts it, the DBH predicts that

> proficient native speakers will exhibit in relative quantitative terms the same distributional bias found in more absolute terms in the acquisitional data (p. 320)

In particular, this means that native speakers also have the tendency of attaching past or perfective markers to accomplishments and achievements, and progressives to activities.

For the advocates of the DBH, since the distributional pattern that is observed in both L1 and L2 learners also occurs in native speech, it is not the case that learners are showing some kind of deviant behavior, but rather are employing verbal morphology in the same manner as native speakers do (see Weist et al (1989) for L1A, and Rhode (1996) for L2). Nevertheless, it is important to point out that the reason why this may be the case is not discussed in the literature.

The studies set out to investigate the DBH have focused on analyzing not only the learners' production of verbal morphology, but also the type of speech that is addressed to them. What defenders of the DBH have tried to prove is that, in normal interaction, native speakers display the same tendency of using particular verb morphemes with certain classes of verbs, also following the aspect hypothesis. Some empirical evidence has been used as support for the distributional bias claim (see review in Andersen & Shirai, 1996). Yet, because only very few studies focusing on native speech input in relation to aspect have been conducted, my personal view is that further inquiry into this issue is required before more definitive claims can be made.

Another alternative explanation that is found in the literature was initially proposed by Andersen (1989, 1993) and Andersen & Shirai (1994), and later adopted by Bardovi-Harlig (1999) and Robison (1995b), among others. Based on Slobin's (1985) account, Andersen (1989, 1993) proposed a number of cognitive operating principles and notions that supposedly account for the patterns in the distribution of verbal morphology found in L1 and L2 acquisition. They are the **Relevance Principle**, the **Congruence Principle**, the **One-to-One Principle**, and the **Subset Principle** – more recently replaced with the **prototypicality notion** (Andersen & Shirai, 1994).

The Relevance Principle as a possible explanation for the Primacy of Aspect Hypothesis was based on Bybee's (1985) and Slobin's (1985) work. Bybee's particular contribution to this discussion was to show that in languages that have distinct morphological inflections to mark aspect and tense, aspect inflections are closer to the stem than tense inflections. Even though this claim cannot be tested in languages like English, in which the same morphological marker is used for both features, research on other languages (for instance, Russian) is assumed to reinforce this view. If it is the case that acquisition processes are guided by the Relevance principle, Andersen (1989) predicts that

> aspect would be perceived and internalized earliest, since it is most relevant to the lexical item to which it attached, the verb. Tense would be next, since it has wider scope than aspect, but is more relevant to the verb than subject-verb agreement, which would be last. (p. 124).

The main argument put forward by the defenders of the Relevance Principle is that while aspect is particularly relevant to the meaning of the verb, tense is not only relevant to the verb but also contributes to the interpretation of

> the predicate, sentence or even a broader chunk of discourse. Early marking of inherent lexical aspect but not tense, thus, appears to be a consequence of the greater relevance of aspect to the meaning of the verb than tense (Andersen, p. 18).

The operation of the Relevance Principle is determined by the Congruence Principle that postulates that learners will have the tendency to employ tense-aspect inflections whose meaning most resembles that of the verb.

> A grammatical morpheme is used by learners according to how congruent the meaning of the morpheme is with the meaning of the lexical item to which it is attached. (…) Thus, the first inflections that children use are those that are most relevant to the meaning of the verb (the Relevance Principle) and of these inflections, it is the inflection whose meaning is most congruent with the meaning of the verb stem that will be attached to a particular verb (the Congruence Principle). (Andersen, 1993: 328-329)

Giacalone Ramat (1995) introduces a similar principle which she names 'Principle of Selective Association'. She argues that, when faced with the language acquisition task, learners "put together features that are semantically congruent, such as telicity, perfectivity, pastness" (p. 302).

In addition to the above two principles, Andersen (1984, 1993) posits that learners are guided by the One-to-One Principle as well. This principle is responsible for directing learners to conclude that each new morpheme that is discovered has one and only one meaning, function and distribution.

Furthermore, a fourth cognitive construct, called **prototypicality** (Andersen & Shirai, 1994), has been proposed as complementary in accounting for learners' behavior with respect to aspect-tense marking. According to Andersen & Shirai (1996),

> tense and aspect morphemes are prototype categories and (…) learners (both L1 and L2 learners) initially discover the least marked member of each category (one unitary achievement or accomplishment for past or perfective) and only later and gradually add progressively more marked members to their pool of "past" and "perfective" marked verbs. (p. 560)

In brief, the prototype account aims at explaining the factors that exert influence over learners' choices with respect to morphology marking. According to this view, learners decide which particular meaning to attribute to a certain form/meaning correspondence based on semantic prototypes. That is, each particular aspect-tense category, such as past, perfective or progressive, is conceived as "a prototype category consisting of good members and marginal members" (Andersen & Shirai, 1996: 556). Thus, from the input learners are exposed to, they infer a prototypical meaning for each verb inflection, such as 'deictic past' for the past tense *–ed* morpheme, and 'process' or 'action in progress' for progressive *–ing*[45]. Accordingly, other possible meanings, such as 'habitual or iterative meaning' for past tense, or 'futurate' for progressive are considered marginal. It is thus argued that speakers learn to affiliate an inflection to its prototypical meaning through an interaction of the One-to-One Principle with prototypicality.

[45] For further details on the prototype theory, including proposed internal structures for certain aspectual categories, see Andersen & Shirai (1996), and references therein. Giacalone Ramat (1997) discusses markedness in the case of progressives in Italian.

Two serious difficulties with the prototypicality account are standardly recognized. The first one lies in determining dependable autonomous criteria to be used in theoretically deciding the prototypical member of each tense-aspect category, as well as the hierarchical relationship of more and less marked members within the category. Concerning this issue, Andersen & Shirai (1996) acknowledge that "at this point, there is no established and reliable measure to determine the internal structure of a prototype category" (p. 557). A further related problem is identifying the cognitive mechanisms that are utilized by learners in the process of figuring out the marked form of the category. That is, since the quality of input a learner receives cannot be controlled for, as a consequence he/she is exposed to all sorts of language, in which more and less marked members are present. The question that arises is, from all that is available in the input, how does the learner find out which prototypical meaning to assign to each particular inflection?

I believe that the immediate advantage of Andersen's principles, as they stand, is their enormous intuitive appeal. A serious difficulty, however, lies in verifying to what extent these principles actually explain what happens in first and second language acquisition of aspect. Assessing the applicability of these principles is no easy task. Therefore, not much clear evidence backing up these assertions has been provided.

2.6 Conclusion

In sum, in this chapter, I discussed the Primacy of Aspect Hypothesis at some length. I first looked at the most important L1 studies on aspect. Findings consistent with the aspect hypothesis predictions as well as some possible counter-evidence were critically analyzed. Next, a discussion about aspect development in second language acquisition was provided. At this point, I introduced the empirical justification for and against the POA claims in detail and carefully examined it. Finally, the main approaches to explaining learners' performance in acquisition with respect to tense-aspectual marking were presented.

In the next chapter, I will describe the study that was conducted, under controlled conditions, to test if the POA predictions hold in the case of Brazilian Portuguese speakers learning English as a foreign language.

3 THE STUDY

3.1 Introduction

I have previously presented evidence for and against the aspect hypothesis claims in both first and second language acquisition contexts. I have also demonstrated the strong intuitive appeal that characterizes the way the aspect predictions have been formulated. In spite of such a seductive appeal, I have shown that most studies that are claimed to have given support to the hypothesis have relied on spontaneous methods of data collection.

My view on the issue is that in order for us to make strong claims concerning the influence of inherent lexical aspect on the acquisition of verb morphology, further research is strongly required. In particular, it is necessary that the aspect hypothesis be tested with the help of more controlled methods of data collection and analysis. The main goal of this investigation is to verify the aspect claims under such conditions. Motivated by the findings reported in Chapter 2, I thus decided to put the aspect claims to test, under highly controlled experimental conditions, to see if they endure the test of rigor.

It is worth noting that this research project is unique in that Brazilian Portuguese native-speakers learning ESL have never been tested for aspectual marking before. A further important characteristic of this investigation is that, in

contrast to most aspect studies, controlled tasks testing both production and comprehension have been employed.

In this chapter, I will first introduce the research questions that have guided our investigation. Next, the general and specific research hypotheses will be discussed. In Section 3.4, I will provide detailed information about the test materials designed for the study. Then, a description of the two groups of participants (English learners and control subjects) in the study will be given. The procedures used for data collection will also be supplied, followed by a brief explanation of the criteria used in scoring the data.

3.2 Research questions

The general question underlying this investigation as well as most of the ones examining the aspect hypothesis is whether learners are initially influenced by the inherent semantic aspect of verbs in the acquisition of tense and aspect markers associated with these verbs. In particular, this study set out to explore whether English learners, at early stages, use verb morphology in a target-like manner or if its use will reflect inherent aspectual properties of verbs.

The research questions that have guided our investigation are:

1. Does lexical aspect affect L2 acquisition of inflectional morphemes? In particular, do L2 learners initially use tense-aspect inflectional

morphology to encode the inherent aspect of the verb rather than tense, in accordance with the Primacy of Aspect Hypothesis?

2. How are each of the lexical aspectual classes (states, activities, accomplishments and achievements) marked by learners?

3. Does verbal morphology show differential distribution across aspectual verb classes?

4. Is there a correlation between the acquisition of tense, grammatical aspect and lexical aspect and level of proficiency?

5. Is there a task effect on comprehension versus production of grammatical morphemes?

3.3 Research hypotheses

Holding grammatical aspect and aspectual class constant, the following **general hypotheses** were put forward to investigate the research questions presented above:

1. When Interlanguage verbal morphology emerges, that is, in the beginning stages of L2 acquisition, inflectional endings will reflect aspectual properties before tense.

2. If there is a task effect, both beginners and intermediate learners will show lower scores in the production task (Elicited Production Task) in comparison to the comprehension task (Preference Task).

Because the imperfective aspect is not present in the English language, only three of the predictions of the Primacy of Aspect Hypothesis were tested. Next, I will outline the **specific research hypotheses** that relate to each of the POA predictions discussed in the previous chapter.

POA prediction:

Learners first use perfective (past marking) on achievement and accomplishment verbs, eventually extending its use to activities and statives.

Hypotheses:

3.a. Lower level learners will have a higher production rate for the perfective *–ed/IRREG* marking on achievements and accomplishments than on activities and states, regardless of tense.

3.b. Higher level learners will not show a significant difference in terms of accuracy rate on the use of perfective (*–ed/IRREG*) for the different aspectual classes.

In our particular case, for the POA hypothesis to be validated, beginning learners would have to demonstrate overextension of *–ed/IRREG* morphology to accomplishments and achievements in target present tense and

past progressive contexts in the Preference Task. In other words, in target present tense sentences, subjects will do better in sentences such as (90a), which contains an activity verb (i.e., they will correctly select the present form ***rides***), than in sentences such as (90b) and (90c), in which achievement and accomplishment verbs were used (i.e., they will incorrectly select ***opened*** and ***painted***). In addition, it is also expected that the total scores of (90b) and (90c) do not present any significant difference. Conversely, more advanced learners will not incorrectly attach *–ed/IRREG* to achievement and accomplishment verbs.

(90) a. - Does your brother have a car?
- No, he doesn't. He ***rode*** / ***rides*** a motorcycle.

b. - I would like to eat at Giovanni's. It's 6:30 now. Does anyone know if the restaurant is open?
- Yes, Giovanni ***opened / opens*** his restaurant at 5:00 every day.

c. Harry's wife is a very productive artist. She makes a lot of money too. At the moment, she ***paints / painted*** a new picture every month.

Besides, in target past progressive sentences, lower level learners will also present higher scores in sentences such as (91a) than in sentences such as (91b). That means, they will prefer ***was playing*** in (91a), because *play* is an activity verb, but will incorrectly select ***build*** in sentences such as (91b), since *build* is an accomplishment verb. On the other hand, higher level learners are expected not to show such behavior.

(91) a. Last Sunday, I went to visit my grandmother and some of her old friends were there. She loves card games. She ***played / was playing*** canasta with them when I arrived.

b. John's father lives in New Zealand. He is an engineer but at the moment he's unemployed. He ***built / was building*** a bridge there when he got fired.

Furthermore, in the Elicited Production Task, in target past tense contexts, we should find more correct answers (i.e., learners supplying the past tense form of the verb) in achievement and accomplishment sentences, such as (92a) and (92b) below, than in activity sentences, such as (92c), regardless of correct target tense.

(92) a. Last week, the famous doctor _____ at Annex Hospital. (to start a job)

b. Now, every week, the famous artist _____ for the gallery. (to paint a picture)

c. Yesterday, the girl _____ with some friends at school. (to study French History)

The aspect hypothesis also predicts that there will be significant overextension of *–ed/IRREG* morphology onto accomplishment verbs that appear in progressive contexts, such as (93a) and (93b), but not onto activity verbs that occur in progressive contexts, as (93b) and (93d). Again, this is predicted to happen in the case of beginning learners, but not in the case of more advanced learners.

(93) a. At this very moment, my brother _____ in the country. (to paint a house)

b. Last month, Tom had a heart attack while he _____ in the kitchen. (to paint the windows)

c. Look, right there, Gregory _____ with his classmates from school. (to ride a horse)

d. Last night, my friend _____ when the phone rang. (to study Russian Architecture)

POA prediction:

In languages that have progressive aspect, progressive marking begins with activities, then extends to accomplishments and achievements.

Hypotheses:

4.a. Lower level learners will have a higher production rate for the use of *ing* on activity verbs than on any other aspectual class, regardless of tense.

4.b. In the case of higher level learners, *–ing* will not be associated with activity verbs more often than with accomplishment and achievement verbs, thus following the pattern presented by the native speakers.

In our case, that means lower level learners will tend to associate the *–ing* morpheme with activities at a higher rate than with the other verbs in the Preference Task, unlike higher level learners. That is, beginners will have more correct responses (i.e., choose the *–ing* form of the verb) in progressive sentences (both present and past) containing the *–ing* morpheme attached to activities, such as (94a) and (94b), than in sentences in which the *-ing* morpheme is associated with accomplishment verbs, such as (94c) and (94d).

(94) a. (the phone rings)

- Is Vanessa there right now?
- I'm sorry, but Vanessa is not at home. She ***studies / is studying*** Geography in the library.

b. - Did Larry study for his test yesterday morning?

- His mother told me that he did. He ***studied / was studying*** when she phoned him.

c. (two teenagers talking)

- Let's play soccer.
- I'm sorry, but I can't right now. My father ***paints / is painting*** the new garage. If I go in there now to get the football, he'll ask for help!

d. - What happened to Victor? Did he have a car accident?

- Nothing very serious. He ***painted / was painting*** the kitchen walls when he hurt his back. He fell off the ladder but he'll be fine in a couple of days, the doctor said.

In addition to that, unlike more advanced students, lower level learners are expected to overextend the *–ing* inflection to activity verbs in both simple present and past contexts in the Elicited Production Task. In other words, beginning learners will show a high production rate of the *–ing* inflection in sentences containing activity predicates, such as (95a) and (95b), but will not attach the progressive inflection to sentences containing achievement predicates, such as (95c), regardless of target tense marking.

(95) a. Usually, Jessica's boyfriend _____ in his free time. (to study Greek Philosophy)

b. Yesterday morning, our Geography teacher _____ with us. (to ride her bicycle)

c. Yesterday evening, the boss _____ before the secretary. (to leave the office)

POA prediction:

Progressive markings are not incorrectly overextended to statives.

Hypothesis:

5.a. Lower as well as higher level learners will not attach *–ing* to statives, irrespective of the fact that Brazilian Portuguese allows for the use of the progressive marker in verbs from all aspectual class.

In our particular case, for the POA hypothesis to be confirmed, occurrences of progressive marking with stative verbs should be found in neither of the two tasks. To illustrate, in the Preference Task, learners are not predicted to incorrectly choose the form ***is knowing*** in sentence (96a) nor the form ***was believing*** in sentence (96b).

(96) a. - Are you sure Peter and you will not get lost?
- Don't worry! Your husband has told Peter how to get to your house. Peter ***knows / is knowing*** the way now.

b. At first, the nurse was worried with me. She thought I didn't like what she said in the meeting. She ***was believing / believed*** I was angry with her. But when I talked to her on the phone, she finally understood my point-of-view.

In the Elicited Production Task, the aspect hypothesis predicts that learners will not choose to associate the *-ing* morpheme with stative verbs in sentences such as (97a) and (97b) below.

(97) a. Nowadays, the boy _____ written by Agatha Christie. (to love detective stories)

b. Before the last incident with her boss, the woman _____ at Sony. (to love her job)

POA prediction:

According to Andersen (1992) and Robison (1995a), English third person singular marking correlates with stative aspect.

Hypotheses:

6.a. Lower level learners will employ the third person singular morpheme *–s* to mark states at a higher rate than with verbs belonging to the other aspectual classes.

6.b. Higher level learners will not overextend the use of the third person singular morpheme *–s* to stative predicates.

When given two options, as in the Preference Task, lower level learners are expected to present a higher error rate in past sentences containing stative verbs than in sentences containing verbs from other classes. In other words, in sentences such as (98a), (98b), (98c), and (98d), for instance, in which the past tense form would be the correct response, learners will

incorrectly select the present form ***loves*** in (98a) more often than they will choose the incorrect forms ***rides***, ***paints***, and ***starts***, in sentences (98b), (98c), and (98d) respectively.

(98) a. Last Friday, Margaret's boss gave a party. It was the second anniversary of the company. Margaret ***loves / loved*** the party, the music and the cake.

b. My Uncle Mario is very old now. He doesn't exercise anymore. He's 98. But as a young man he ***rides / rode*** a bicycle very well.

c. Last Sunday, my husband was very tired. In the morning, he cut the grass. Then, he ***paints / painted*** the whole garage. After that, he took care of the flowers.

d. Yesterday, Greg's boss was very mad at him. They had an important meeting at work. The boss ***started / starts*** the meeting at 2 o'clock. But Gregg only arrived at the office at 3:30.

Moreover, for the POA hypothesis to be corroborated, in the Elicited Production Task, subjects are expected to present a higher rate of overextension of the *–s* inflection in past sentences containing stative verbs (99a) than in past sentences containing activities (99b), accomplishments (99c) and achievements (99d).

(99) a. Last year, when Michael's wife kept telling him lies, he _____ about her. (to know the truth)

b. Yesterday, the girl _____ with some friends at school. (to study French History)

c. Two years ago, my husband _____ near the beach in Florida. (to build a condominium)

d. Yesterday evening, the boss _____ before the secretary. (to leave the office)

3.4 Methodology

This study explores the phenomenon of the acquisition of verbal morphology across proficiency groups by analyzing learners' responses in two tasks: (a) a Preference Task (PT), and (b) an Elicited Production Task (EPT). Participants were classified into proficiency levels on the basis of a standardized test. I will provide details of the English placement test as well as the two instruments adopted in the present study below. A brief description of the participants will also be provided.

3.4.1 Test materials and tasks

In order to find out whether processing mode affects acquisition of L2 grammatical morphemes, two tasks were especially designed. Comprehension was tested through a Preference Task (which hereafter we will refer to as the PT) (Appendix A), and production was tested through an Elicited Production Task (which hereafter we will refer to as the EPT) (Appendix B).

In the construction of sentences for the tasks, I tried to provide an unambiguous context by using time adverbs. In order to test the predictions

above, obligatory contexts for the use of simple present and past tenses, as well as present and past progressive forms were developed. The verbs used in the instruments were chosen among lists of verbs provided by some of the aspect experiments reported in the previous chapter. A total of twelve verbs were selected, three verbs from each of the four Vendler categories. One irregular and two regular verbs were used in each class. The verbs tested are: *love*, *believe*, *know* (stative verbs); *study*, *play*, *ride* (activity verbs); *produce*, *paint*, *build* (accomplishment verbs); and *start*, *open*, *leave* (achievement verbs). The PT consisted of sentences employing all three verbs, whereas the EPT contained sentences with two verbs from each class (one regular and one irregular).

Finally, in order to make sure that the test sentences were equally representative of the four aspectual categories, three operational tests (based on Robison, 1990, 1995a, b) were also applied to all items in both tasks. When a sentence failed in one of the three tests, it was rejected and replaced.

3.4.1.1 Preference Task (PT)

In the Preference Task, participants had to select from two options the form of the verb that best completed the sentence, as example (100) below shows.

(100) - What happened to Victor? Did he have a car accident?

- Nothing very serious. He ***painted*** / ***was painting*** the kitchen walls when he hurt his back. He fell off the ladder but he'll be fine in a couple of days, the doctor said.

The paragraphs or dialogs were structured the following way. The first two or three sentences established the context and the test sentence was always the third or fourth sentence in the paragraph. Time adverbs were always used in the sentences preceding the test sentence, never in the test item itself or after it. The options from which subjects had to select were italicized and highlighted in order for the learners not to miss them.

The Preference Task consisted of 47 sentences (42 test items and 5 fillers) for which the subjects had to select the appropriate tense. The choice of verbs was balanced among the 4 aspectual classes. There were 15 appropriate responses for simple present and 15 for simple past (6 for statives, 3 for activities, 3 for accomplishments, and 3 for achievements). There were 6 appropriate responses for present progressive and 6 for past progressive (3 for activities, and 3 for accomplishments). Achievement predicates were not tested in the progressive tenses for the POA hypothesis does not make any specific predictions with respect to them. The number of sentences in the simple and progressive tenses are not the same due to the fact that English does not normally accept stative verbs in the progressive tenses. The number of grammatical stative sentences in the simple tenses is twice the number of the other types of sentences due to the need of having ungrammatical stative sentences testing the predictions regarding the overextension of perfective

markings in present tense as well as the prediction regarding the overextension of progressive inflections onto stative sentences.

In order to test the hypotheses outlined above, the test items were constructed as follows. In target simple present tense sentences, the ungrammatical choice was the past tense form of the verb. For instance, in the example below, ***plays*** would be the grammatical response, and ***played*** the ungrammatical response.

(101) Jerry loves sports. Every Sunday he goes to the club with his friends. He ***plays*** / ***played*** soccer and baseball there.

My goal here was to find out whether it is the case that beginning learners incorrectly affiliate the perfective *–ed/IRREG* marking with achievements and accomplishments regardless of target tense. As I have already discussed, in order for the POA prediction to be confirmed, subjects should demonstrate a higher production rate of ungrammatical sentences containing achievement and accomplishment predicates in comparison to activity and stative verbs in the present tense form.

In target simple past sentences, the ungrammatical choice was the third singular marking of the verb in the present tense. In sentence (102), for example, the selection of ***loved*** would be considered a grammatical choice, whereas the selection of ***loves*** would be considered an ungrammatical response.

(102) Last Friday, Margaret's boss gave a party. It was the second anniversary of the company. Margaret ***loves / loved*** the party, the music and the cake.

With this group of sentences I aimed at investigating whether English present tense inflections, in particular, the third person singular marking *–s* correlates with stative aspect, even in non-native-like situations. If it is the case that the POA holds, lower level learners should employ the third person singular morpheme *–s* to mark states at a greater rate than with verbs belonging to the other aspectual classes.

In target present progressive contexts, the ungrammatical sentences employed the third singular marking of the verb in the present tense (***paints*** in example (103a)), whereas target past progressive sentences were paired with ungrammatical sentences in the past tense form (***built*** in example (103b)).

(103) a. (two teenagers talking)
- Let's play soccer.
- I'm sorry, but I can't right now. My father ***paints / is painting*** the new garage. If I go in there now to get the football, he'll ask for help.

b. John's father lives in New Zealand. He is an engineer but at the moment he's unemployed. He ***built / was building*** a bridge there when he got fired.

My purpose with the use of progressive sentences was twofold. First, I was interested in investigating the prediction according to which there is a strong correlation between the progressive inflection and activity predicates. If the POA holds, it follows that in both present and past progressive contexts, the correction rate for activity verbs will be higher than for verbs from other classes.

Second, I wanted to see whether learners actually overextend the use of the progressive inflection (***-ing***) to stative predicates in non-native-like ways. In order for that specific hypothesis to be tested, sentences such as (104a) and (104b) below were constructed. The ungrammatical choice explored the use of the progressive marking associated with stative predicates (i.e., ***is knowing*** and ***was believing***).

(104) a. - Are you sure Peter and you will not get lost?
- Don't worry! Your husband has told Peter how to get to your house. Peter ***knows / is knowing*** the way now.

b. At first, the nurse was worried with me. She thought I didn't like what she said in the meeting. She ***was believing*** / ***believed*** I was angry with her. But when I talked to her on the phone, she finally understood my point of view.

The instrument also contained two practice sentences and 5 fillers involving other aspects of the structure of English, such as spelling and subject-verb agreement. See example (105) below for an illustration.

(105) My neighbor is very upset. The cat that lived with her ***died*** / ***dead*** because it was very old.

The sentences in the test were randomized to prevent two items containing the same verb from appearing one following the other. Two batteries of tests, in which the same target items were presented in different orders, were applied. Subjects were instructed to use their intuitions about the language and were asked not to go back to make changes on the items they had chosen.

3.4.1.2 Elicited Production Task (EPT)

The Elicited Production Task involved 38 sentences: 28 target items and 10 fillers. The test items consisted of sentences in which the verb phrases (verb plus direct object) were missing. The infinitival form of the verb accompanied by two words to be used as complements of the verb were supplied inside brackets, at the end of the sentence. Learners were asked to read the incomplete sentence silently first, and then read the sentence aloud onto a tape-recorder, supplying the correct agreement in the blank space.

(106) Last week, the famous doctor _____ at Annex Hospital. (to start a job)

Due to the difficulty of constructing unambiguous contexts in a task such as this one, time adverbs were used. It is worth noting that my choice was to always have them at the beginning of the sentence. Moreover, all verbs were tested in the third person singular environment so that overt morphological marking would be obligatory in the present as well as in the past and progressive forms.

Broken down by lexical aspectual class, the 28 items consisted of 10 appropriate responses for simple present and 10 for simple past, as well as 4 appropriate responses for present and past progressive forms. The simple present and past tenses included 4 statives, 2 activities, 2 accomplishments and 2 achievements each. The progressive sentences included 2 activities and 2 accomplishments in both present and past. Due to time constraints as well as the kind of processing demand that is required from the participants in an

elicited production task, only two verbs – one regular and one irregular – were used. They were *love* and *know* (statives); *study* and *ride* (activities); *paint* and *build* (accomplishments); *leave* and *start* (achievements). The reasons for the absence of stative and achievement sentences in the progressive forms, as well as for the higher number of stative sentences in the simple forms in comparison to the number of sentences from the other classes, have already been mentioned.

The test items in the Elicited Production Task were constructed to test the following the POA predictions. In providing target simple past tense contexts, I intended to test the prediction according to which learners at the first stages of the acquisition process incorrectly associate the perfective *–ed/IRREG* marking with accomplishments and achievements, regardless of target tense distinctions. Thus, if the POA holds, the rate of correct responses for sentences containing accomplishment verbs, such as (107a), will be significantly higher than for sentences containing activity verbs, such as (107b) below.

(107) a. Two years ago, my husband _____ near the beach in Florida. (to build a condominium)

b. Yesterday morning, our Geography teacher _____ with us. (to ride her bicycle)

The number of incorrect *–ed* responses will also be relevant to test the prediction above. The overall number of sentences containing the *–ed* morpheme in non-target-like contexts (that is, in present and progressive situations) will be analyzed. Statistical assessments of the rate of use of the *–ed*

inflection across the four aspectual classes will be made. In case subjects incorrectly applied the *–ed* inflectional morpheme to accomplishments and achievements significantly more often than to activities and states, the aspect hypothesis is confirmed.

In a similar manner to what has been discussed above for the Preference Task, with respect to the progressive sentences the question I am interested in relates to the presumed correlation between the progressive inflection and activity predicates. In order to verify the truth of such a claim, a comparison of the number of incorrect uses of the *-ing* inflection in simple present and past tenses will be made. Subjects are expected to, in both present and past situations, incorrectly use *–ing* more often with activities, as in (108a), than with other verbs, such as in sentence (108b), in which an achievement verb was employed.

(108) a. Yesterday morning, our Geography teacher _____ with us. (to ride her bicycle)

b. Yesterday evening, the boss _____ before the secretary. (to leave the office)

Another line of analysis to be pursued here involves the investigation of overextension of progressive marking onto statives (see example (109a) below). If the aspect hypothesis holds, learners will not apply the progressive morpheme to stative predicates, irrespective of the behavior of stative predicates in Brazilian Portuguese. In order to assess this specific hypothesis, I will examine those incorrect responses in which the *–ing* was associated with

statives in comparison to the incorrect responses that appear with verbs from other aspectual classes (109b).

(109) a. Last year, when Michael's wife kept telling him lies, he _____ about her. (to know the truth)

b. Before the last incident with her boss, the woman _____ her job at Sony. (to love her job)

The last prediction to be tested here relates to the examination of the prediction according to which third person singular marking is initially attached to stative predicates. This hypothesis will be put to test through the analysis of the number of incorrect responses – i.e., sentences in which subjects used the *–s* morpheme with statives (110a) more often than with other verbs, as in (110b) and (110c) – in target past tense situations.

(110) a. Last year, when Michael's wife kept telling him lies, he _____ about her. (to know the truth)

b. Yesterday, the girl _____ with some friends at school. (to study French History)

c. Two years ago, my husband _____ near the beach in Florida. (to build a condominium)

Finally, the Elicited Production Task contained two practice sentences and 10 fillers (see (111)). As in the Preference Task, here again two versions of the instrument were used, and the sentences were randomized to prevent two items containing the same verb from appearing in a row.

(111) I think Mark and Andy _____ at school tomorrow. (to have a fight)

3.4.1.3 Proficiency levels

To independently assess the subjects' proficiency in English, I decided to use an independent measure of proficiency that had the advantages of being effective and not particularly time-consuming, since the two instruments were both long and demanding. My choice was to use the grammar section of the Michigan Test of English Language Proficiency, designed by the English Language Institute, University of Michigan (Appendix C). The placement test consisted of 30 multiple-choice questions containing incomplete short conversations between two people. Four alternatives were given for the subject to complete each of the conversations, but only one answer was correct. The answers had to be marked in an answer sheet.

In order to divide subjects into two levels of proficiency, the following criterion was adopted. Since the mean average of correct responses was 17, learners who scored between 5 and 16 (i.e., below average) were classified into Level A, and participants who had between 17 and 29 correct answers (i.e., average and above) were placed into Level B. After the division was made, I ended up with 23 subjects in Level A and 30 subjects in Level B.

3.4.2 Participants

In this dissertation, I analyze the data from two groups of participants, an experimental group and a control group. The experimental

group contained 53 Brazilian Portuguese native speakers, learning English as an L2 in Brazil. The control group consisted of 27 native English speakers.

3.4.2.1 Brazilian subjects

In this experiment, data from 53 Brazilian participants was analyzed. All participants were studying English as a foreign language at ICBNA – Instituto Cultural Brasileiro Norte-Americano – a private language course, downtown Porto Alegre, RS, in the south of Brazil. All informants were adults (over 18), ages ranging between 18 and 57 – average age, 29. There were 31 female and 22 male learners in the group.

All 53 participants declared that BP was their native language. That is, none of them has learned to speak any language other than BP before the age of six. Out of the 53 informants, 9 claimed to know a little Spanish, 3 stated to have some knowledge of French, 2 declared that sometimes they spoke German at home with their parents, 2 said that they occasionally spoke Italian at home with their parents, and 1 subject said that she spoke Japanese with relatives once in a while.

None of the subjects has ever lived abroad, except for one subject who has lived in the United States for 6 months and another one who has lived in Italy for a period of 3 months. With respect to education, 21 participants have a college degree, 10 have taken a graduate course, and 22 have not graduated

from high school yet. Concerning English instruction, the average length of classroom instruction was 5 years and 9 months, ranging from 3 months to 22 years with interruptions.

With a few exceptions, all of them rarely speak English outside the classroom. Apart from that, 64% declared to have some occasional contact with the language (especially in the written form) at work or school. Some of the occupations mentioned were: student (14), teacher (3), engineer (5), computer programmer (4), lawyer (3), accountant (3), psychologist (2), doctor (2), secretary (2), economist (1), dentist (1), and mathematician (3), among others.

When asked about the main reason why they were studying English, the great majority expressed concern with respect to their professional careers. The second reason mentioned was interest in traveling or being able to talk to foreigners. Finally, participants also mentioned their interest in using the Internet, watching movies without subtitles, and understanding lyrics in English.

3.4.2.2 Control subjects

The control group consisted of 27 English native speakers, of which 16 live in the United States and 11 live in Canada (Montreal), who volunteered to participate in the study. Their ages ranged from 22 to 59 years old (average age, 36). The most common occupations were: student, university lecturer, retired nurse, computer designer, cook, and researcher. All informants reported to have a college degree.

3.5 Procedures

In order to avoid any vocabulary effects, the items that appear in the tasks were checked before the application of the instruments. Furthermore, the order of presentation of the tasks was counter-balanced. In other words, half of the subjects took the Preference Task before participating in the Elicited Production Task, while the other half participated in the Elicited Production Task before taking the Preference Task. Apart from that, other possible effects were controlled for through the use of two versions of each of the tasks.

For the Brazilian subjects, both tasks were administered in small groups. The Preference Task was administered in the language classroom, whereas the Elicited Production Task took place in the language laboratory. Groups varied from 5 to 14 subjects, depending on the number of students enrolled in each level. Participants were first asked to read and fill out the consent form (Appendix D). Next, the vocabulary practice list (Appendix E) was discussed and all doubts regarding new lexical items were clarified. Then, the subjects were either asked to participate in the Preference Task or were taken to the lab for the Elicited Production Task. In the following week, they were asked to take the other test, followed by the English Placement Test.

The subjects who participated as a control group took both tests on an individual basis. Besides, unlike the Brazilian subjects, they did not take the English Placement Test.

3.6 Scoring

Scoring of responses from the task adopted in the study was carried out as follows. In the Preference Task, each response was given a score of **1** or **0**. A score of **1** was used to mark those sentences in which subjects' behavior followed target tense marking. A score of **0** was used when they did not follow target tense marking.

As for the Elicited Production Task, the first step was to transcribe the recordings. Then, the following criteria were adopted. For each test sentence, responses were coded from **1** to **6**. A score of **1** signifies that the subject followed the specific prediction related to that sentence. That is, for a sentence including an achievement verb, for instance, *leave*, a score of **1a** means that the simple past form *left* was used. Scores **1b-1f** mean that the subject also followed the prediction, but that he/she used another form to mark the perfective, for instance, *leaved* or *had leaved*. Past simple forms were scored with a **2** (**2a** – **2f**), simple present forms were scored with a **3** (**3a** – **3b**), progressive forms were scored with a **4** (**4a** – **4g**) or a **5** (**5a** – **5b**), and responses involving base forms received a score of **6** (**6a** – **6e**).

3.7 Conclusion

In sum, the purpose of this chapter was to provide a description of the investigation conducted in order to test the specific predictions of the aspect

hypothesis. Firstly, a detailed presentation of the research questions and hypotheses that guided the research project were given. Secondly, the test materials, a Preference Task, an Elicited Production Task, and an English Proficiency Task were discussed. Thirdly, some information on the individuals who volunteered to participate in the study was supplied. Finally, a description of the procedures that were used in the collection and scoring of the data was provided.

4 RESULTS

4.1 Introduction

The sections in this chapter are organized as follows. First, results of the Preference Task will be reported and discussed. Next, findings pertaining to the subjects' responses in the Elicited Production Task will be introduced and analyzed. Each section is further organized on the basis of the questions and research hypotheses detailed in Chapter 3. That is, in reporting results from each of the tasks, I will begin by discussing the data concerning the use of perfective marking in achievement and accomplishment verbs. Next, I will introduce the evidence regarding the association of progressive marking with activity verbs. Then, findings related to the use of the third person marking on states will be described. Finally, the prediction relative to the affiliation of the progressive inflection with stative verbs will be analyzed.

In addition, since the questions and research hypotheses are based on the association of inherent lexical aspect and verbal morphology across three groups (i.e., lower level learners, higher level learners, and native speaker controls), I applied statistical tests to see whether the associations were significant. Further, a comparison between the subjects' performance in each of the tasks will be done to see if there is a task effect on comprehension versus production of grammatical morphology.

4.2 Preference Task

4.2.1 Overall results

Group results from the Preference Task will be discussed first. Table 7 gives overall results for the two experimental groups (Level A and Level B) and the English native speaker control group for rejection of ungrammatical choices. As we can see, subjects from Level A presented lower scores than subjects from Level B, as expected.

Table 7: Overall rejection of ungrammatical choices in the Preference Task (all subjects)

	Level A	Level B	Native speaker controls
Target values	966	1260	1134
Total correct	761	1111	1118
Mean percent	*79%*	*88%*	*98.6%*

Mean numbers and percentage rejection of ungrammatical forms for each particular verb category (states, activities, accomplishments, and achievements) are given in Table 8 below. Note that subjects from Level B consistently presented higher scores than subjects from Level A for every aspectual class. In order to verify whether the difference in terms of rejection of ungrammatical forms across the four aspectual classes was significant, Analysis of Variance (ANOVA) tests with the results from each level were performed. The tests revealed that in both cases, there was a significant

difference: Level A ($F(3,88)=6.54$, $p<0.001$), and Level B ($F(3,116)=11.23$, $p<0.00001$). Furthermore, it is interesting to note that native speakers did not reject ungrammatical forms categorically ($F(3,104)=6.332$, $p<0.001$).

Table 8: Mean number and percentage rejection of ungrammatical forms (by verb category) in the Preference Task (all subjects)

		States	Activities	Accomplishments	Achievements
Level A	Total correct	190	222	230	119
	Mean	8.2	9.6	10	5.2
	Percentage	*68.8%*	*80.5%*	*83.4%*	*86.3%*
Level B	Total correct	284	333	325	169
	Mean	9.5	11.1	10.8	5.6
	Percentage	*78.9%*	*92.5%*	*90.3%*	*93.4%*
Controls	Total correct	312	324	321	161
	Mean	11.56	12	11.89	5.96
	Percentage	*96.3%*	*100 %*	*99.1%*	*99.4%*

The graph in Figure 1 plots the percentages shown in Table 8 for each group of subjects.

4.2.2 Association of perfective marking with achievements and accomplishments

I now turn to results pertaining to each of the particular aspect predictions discussed in Chapter 3, starting out with the data concerning the

aspect prediction related to overspreading of perfective marking. As I have already pointed out, for the POA hypothesis regarding the acquisition of perfective marking to be corroborated, lower level learners would have to demonstrate overextension of *–ed/IRREG* morphology to accomplishment and achievement verbs in target present tense and past progressive contexts in the Preference Task. In addition, this particular behavior was not predicted to take place in the case of higher level learners.

In order to test for such an effect, results for target present tense sentences were analyzed. In particular, I was interested in finding out whether subjects had accepted ungrammatical forms in sentences containing achievement and accomplishment verbs at a higher rate than ungrammatical forms in sentences containing activity verbs. That is, I expected to find the past form of the verb, for example, ***opened***, in present tense sentences such as

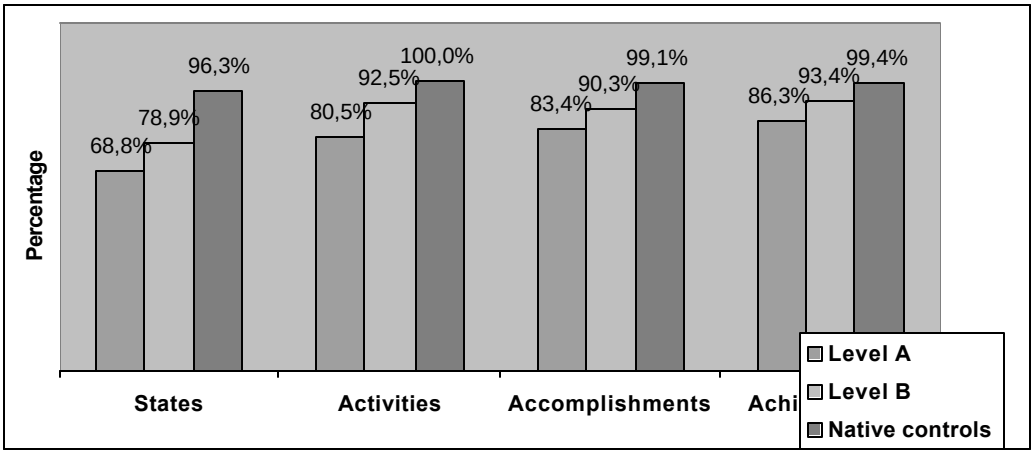


Figure 1: Percentage rejection of ungrammatical choices by verb category in the Preference Task (all subjects)

(112b), more often than, for instance, ***rode***, in present tense sentences such as (112a), because ***open*** is an achievement verb. The same would apply for ***painted***, which is an accomplishment verb, in sentences such as (112c).

(112) a. - Does your brother have a car?
- No, he doesn't. He ***rode*** / ***rides*** a motorcycle.

b. - I would like to eat at Giovanni's. It's 6:30 now. Does anyone know if the restaurant is open?
- Yes, Giovanni ***opened / opens*** his restaurant at 5:00 every day.

c. Harry's wife is a very productive artist. She makes a lot of money too. At the moment, she ***paints / painted*** a new picture every month.

Analysis of Variance tests performed on the data demonstrate that there was no significant difference in terms of acceptability of past morphology in target present tense sentences across verb classes in any of the experimental groups (Level A ($F(3,88)=1.89$, $p=0.14$); Level B ($F(3,116)=1.52$, $p=0.21$); and control group ($F(3,104)=1$, $p=0.39$)). Table 9 gives total scores and percentages of all subjects in target present tense sentences across verbal aspect classes. From the total number of 69, Level A subjects had a score of 57 (83%) correct responses on stative verbs, 62 (90%) on activity verbs, 64 (93%) on accomplishment verbs, and 56 (81%) on achievement verbs. From a total number of 90, Level B subjects had a score of 88 (98%) correct responses on statives, 87 (97%) on activities, 82 (91%) on accomplishments, and 84 (93%) on achievements. Native control subjects had a score of 81 (100%) correct responses on statives, activities, and accomplishments and 80 (98.8%) on achievement verbs, out of a total number of 81. Figures 2, 3 and 4 below show learners' performance as well as native speaker controls' performance on target

present tense sentences across aspectual classes.

Table 9: Correct responses – rejection of ungrammatical past tense forms in target present tense sentences by verb category in the Preference Task (all subjects)

		State	Activities	Accomplishments	Achievements
Level A	Mean correct	2.48	2.69	2.78	2.43
	Total scores	57	62	64	56
	Percentage	*83%*	*90%*	*93%*	*81%*
Level B	Mean correct	2.94	2.9	2.73	2.8
	Total scores	88	87	82	84
	Percentage	*98%*	*97%*	*91%*	*93%*
Native controls	Mean correct	3	3	3	2.96
	Total scores	81	81	81	80
	Percentage	*100%*	*100%*	*100%*	*98.8%*

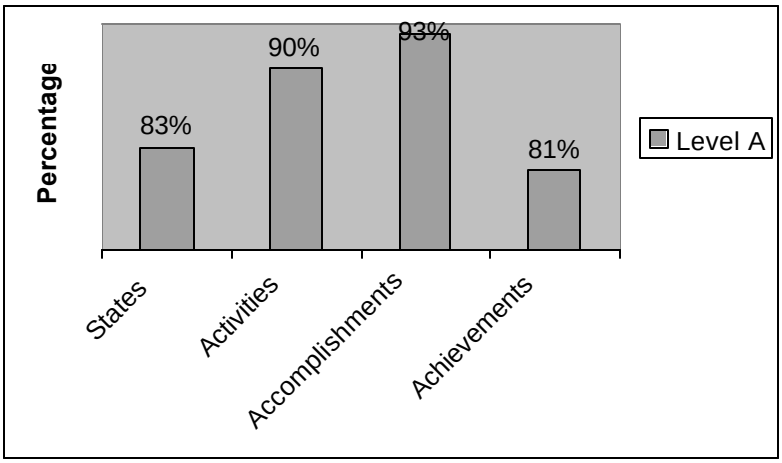


Figure 2: Percentage correct – rejection of ungrammatical past tense forms in target present tense sentences by verb category in the Preference Task (Level A)

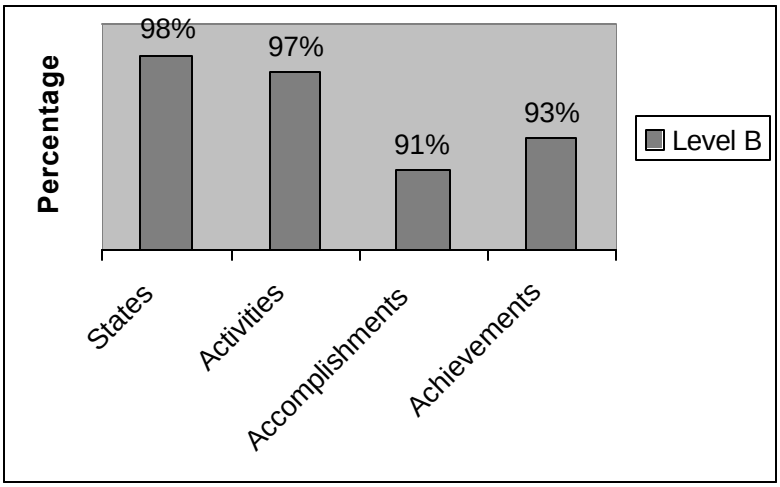


Figure 3: Percentage correct – rejection of ungrammatical past tense forms in target present tense sentences by verb category in the Preference Task (Level B)

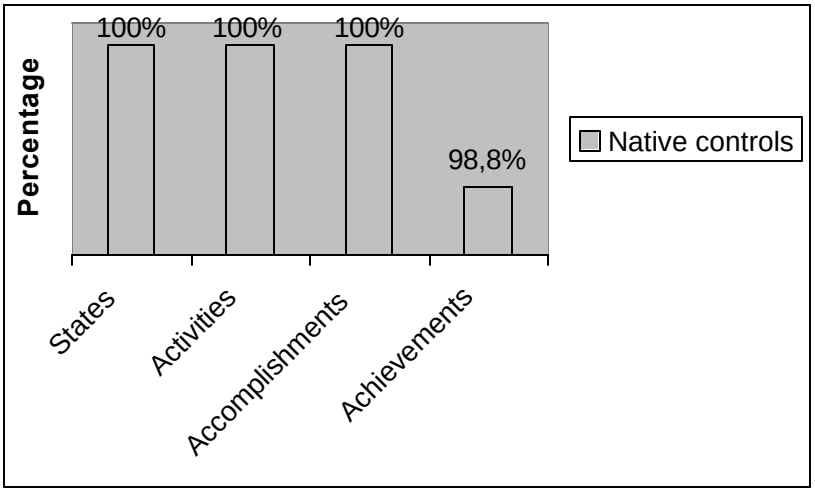


Figure 4: Percentage correct – rejection of ungrammatical past tense forms in target present tense sentences by verb categoryin the Preference Task (native controls)

In addition, regarding the perfective prediction, sets of t-tests were also done. In particular, I compared results in achievement and activity sentences in target present tense. In all cases, the difference between score correct in activity and achievement sentences was not significant. Out of a total number of 3, subjects from Level A demonstrated a mean score of 2.43 (81%) in the achievement sentences and 2.69 (90%) in the activity sentences (t (22)=-1.66, p=0.11). As for Level B subjects, out of a total number of 3, learners showed a mean score of 2.8 (93%) in the achievement sentences in comparison to 2.9 (97%) in the activity sentences (t (29)=1.36, p=0.18). Finally, native speakers had a mean score of 3 (100%) for the activity sentences and 2.96 (98.8%) for the achievement sentences (t (26)=1, p=0.32).

Paired t-tests were also used to compare the responses regarding the affiliation of *–ed/IRREG* with activity and accomplishment verbs. Level A subjects showed a mean score of 2.69 (90%) correct for activities and 2.78 (93%) correct for accomplishments (t (22)=-0.81, p=0.43). Level B learners presented a mean score of 2.9 (97%) correct for activities and 2.73 (91%) for achievements (t (29)=1.72, p=0.09). In this particular case, control subjects had a percentage of 100% correct responses.

So far, all results concerning the perfective prediction refute the Primacy of Aspect Hypothesis. I next turn to the analysis of the past progressive sentences that were also designed to verify the aspect prediction with respect to the overextension of the perfective marking. To validate the hypothesis, lower level learners would have to present higher error rate in sentences in which the

perfective is attached to an accomplishment verb (113a) than in sentences in which the inflection is attached to an activity verb (113b). That is, subjects should incorrectly express a preference for ***built*** in (113a), whereas in (113b) they should prefer the correct form ***was playing***.

(113) a. John's father lives in New Zealand. He is an engineer but at the moment he's unemployed. He ***built / was building*** a bridge there when he got fired.

b. Last Sunday, I went to visit my grandmother and some of her old friends were there. She loves card games. She ***played / was playing*** canasta with them when I arrived.

Paired t-tests show that there was no significant difference between error rate across the two verb classes in past progressive contexts in either level. Even though both groups demonstrated a weak tendency to have fewer errors in sentences containing activity verbs, such a trend was not statistically significant. Level A individuals had a mean score of 2.35 (78%) correct responses for activity sentences and 2.30 (76%) for accomplishment sentences ($t(22)=0.22$, $p=0.82$). On the other hand, Level B subjects had a mean score of 2.8 (93%) in activity sentences and 2.64 (88%) in accomplishment sentences ($t(29)=1.72$, $p=0.09$). Native speakers had a mean score of 3 (100%) correct responses for activity sentences and 2.89 (96%) for accomplishment sentences ($t(26)=1.36$, $p=0.18$). Figure 5 below gives these results.

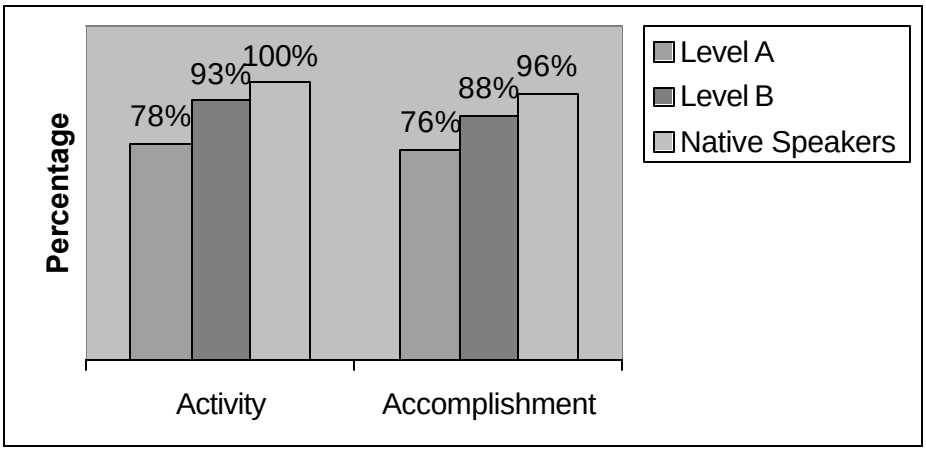


Figure 5: Percentage correct – rejection of ungrammatical past forms in target past progressive sentences in activity and accomplishment sentences in the Preference Task (all subjects)

In summary, all the evidence discussed thus far disproves the aspect hypothesis. Even though learners showed a very weak tendency of incorrectly attaching perfective marking to accomplishments (Level A: 76%, Level B: 88% score correct) in past progressive contexts at a higher rate than to activities (Level A: 78%, Level B: 93% score correct), thus following the prediction, in present tense contexts not even that trend occurred. In fact, results came out in the opposite direction for Level A subjects, who had higher scores of correctly choosing the present inflection in accomplishment sentences (93%) than in activity sentences (90%), thus contradicting the aspect hypothesis. Participants from Level B showed a slight propensity of doing better in the case of activity verbs (97%) than with accomplishment (91%) and achievement (93%) verbs in present environments. However, that fact also refutes the POA hypothesis according to which that should only happen in the case of lower level learners.

4.2.3 Overspread of progressive marking with activities

In order to verify whether subjects followed the POA hypothesis with respect to overspreading of progressive marking, I analyzed the association of the *–ing* morpheme with activities and accomplishments in present and past progressive contexts. In particular, I tested if learners presented more correct responses (i.e., if they chose the *–ing* form of the verb) in sentences containing the *–ing* morpheme attached to activities, such as (114a) and (114b), than in sentences in which the *-ing* morpheme is associated with accomplishment verbs, such as (114c) and (114d). In these circumstances, according to the POA hypothesis learners should, for instance, correctly choose ***is studying*** more often than ***studies***, as well as ***was studying*** more often than ***studied*** at a higher rate than ***is painting*** in comparison to ***paints*** and ***was painting*** in comparison to ***painted***.

(114) a. (the phone rings)
- Is Vanessa there right now?
- I'm sorry, but Vanessa is not at home. She ***studies / is studying*** Geography in the library.

b. - Did Larry study for his test yesterday morning?
- His mother told me that he did. He ***studied / was studying*** when she phoned him.

c. (two teenagers talking)
- Let's play soccer.
- I'm sorry, but I can't right now. My father ***paints / is painting*** the new garage. If I go in there now to get the football, he'll ask for help!

d. - What happened to Victor? Did he have a car accident?

- Nothing very serious. He ***painted*** / ***was painting*** the kitchen walls when he hurt his back. He fell off the ladder but he'll be fine in a couple of days, the doctor said.

To investigate the hypothesis, sets of t-tests were performed on the data. With respect to present progressive, I found that Level A subjects indeed showed a higher score correct with activity verbs (mean average of 2.69, 91%) than with accomplishment verbs (mean average of 2.39, 81%), thus following the general prediction. However, this difference is not statistically significant ($t(22)=1.43$, $p=0.166$). Results from Level B learners came out in the same direction (mean average of 2.9, 97% for activities, and mean average of 2.7, 90% for accomplishments), but again the difference is not statistically significant ($t(29)=1.79$, $p=0.083$). Native control subjects had a 100% score correct for both verb classes in present progressive contexts. Figure 6 shows the percentage correct scores in present progressive contexts.

As for the past progressive sentences, again Level A subjects observed the general trend by demonstrating a higher score correct with activity verbs (mean average of 2.35, 78%) than with accomplishment verbs (mean average of 2.30, 77%). Nevertheless, this difference is not statistically significant either ($t(22)=0.22$, $p=0.82$). Level B subjects also demonstrated the same tendency (mean average of 2.8, 93% for activities, and mean average of 2.63, 88% for accomplishments), and once more the difference is not statistically significant ($t(29)=1.72$, $p=0.096$). Native English speakers had a mean score of 3 (100%) for activity verbs and 2.89 (96%) for accomplishment

verbs in past progressive contexts (t (26)=1.36, p=0.18). Figure 7 below gives the percentage scores for all subjects in past progressive contexts.

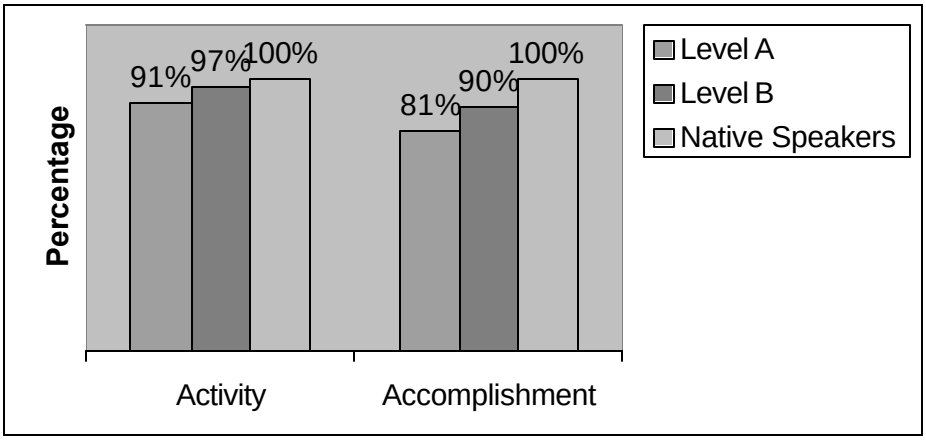


Figure 6: Percentage correct – progressive forms in target present progressive sentences in activity and accomplishment sentences in the Preference Task (all subjects)

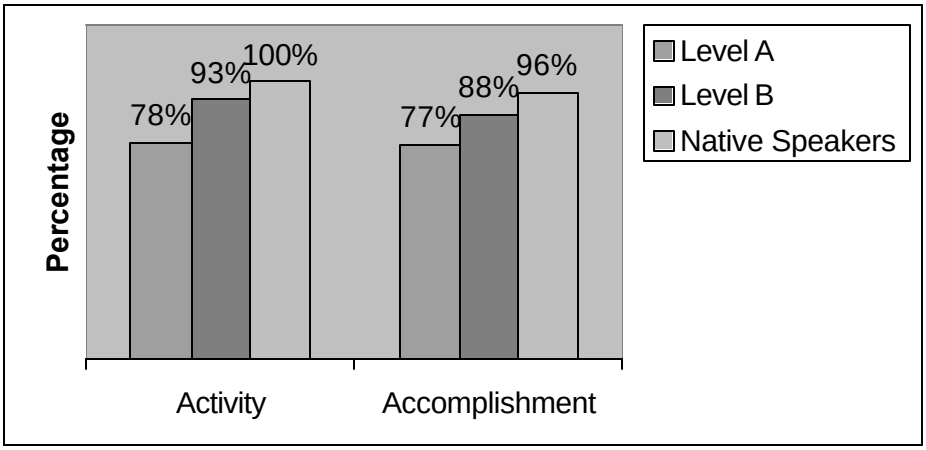


Figure 7: Percentage correct – progressive forms in target past progressive sentences in activity and accomplishment sentences in the Preference Task (all subjects)

In brief, the POA hypothesis was not validated in the case of progressive marking. Even though English learners showed a general trend to correctly mark progressive activity sentences more often than accomplishment sentences in both present and past progressive contexts, the difference between the two scores was not significant in either case.

4.2.4 No occurrence of progressive marking with states

Concerning progressive marking with stative verbs, in order for me to validate the POA hypothesis, no occurrence of the progressive form of a stative verb should be found in either present or past contexts. That means, for instance, that the phrase ***is knowing*** in sentence (115a) nor the form ***was believing*** in sentence (115b) should be accepted by subjects.

(115) a. - Are you sure Peter and you will not get lost?
- Don't worry! Your husband has told Peter how to get to your house. Peter ***knows / is knowing*** the way now.

b. At first, the nurse was worried about me. She thought I didn't like what she said in the meeting. She ***was believing / believed*** I was angry with her. But when I talked to her on the phone, she finally understood my point-of-view.

To examine the hypothesis, percentage scores for the use of *–ing* with statives were calculated for each group of subjects. The results indicate that Level A subjects preferred the *–ing* form (*is V+ing*) over the present simple

form (*V+s*) of the verb in 40.6% of the sentences (28 out of a total of 69), and also chose the past *–ing* form (*was V+ing*) in 40.6% of the sentences (28 out of a total of 69). Level B subjects, on the other hand, used the *–ing* form (*is V+ing*) in 28.9% (26 out of 90) of the present stative sentences, and preferred the form (*was V+ing*) in 42.2% (38 out of a total of 90) of the past stative sentences. Interestingly, the native speaker subjects also showed some association of progressive marking with stative verbs, but more in the case of past progressive sentences (1.2%, i.e., 1 out of a total of 81), than in the case of present progressive sentences (12.4%, i.e., 10 out of 81). Table 10 as well as Figure 8 below present these results.

Table 10: Incorrect responses – acceptance of progressive forms in sentences containing stative verbs in the Preference Task (all subjects)

		Present Progressive	Past Progressive
Level A	Total scores	28 (out of 69)	28 (out of 69)
	Percentage	*40.6%*	*40.6%*
Level B	Total scores	26 (out of 90)	38 (out of 90)
	Percentage	*28.9%*	*42.2%*
Native controls	Total scores	1 (out of 81)	10 (out of 81)
	Percentage	**1.2%**	**12.4%**

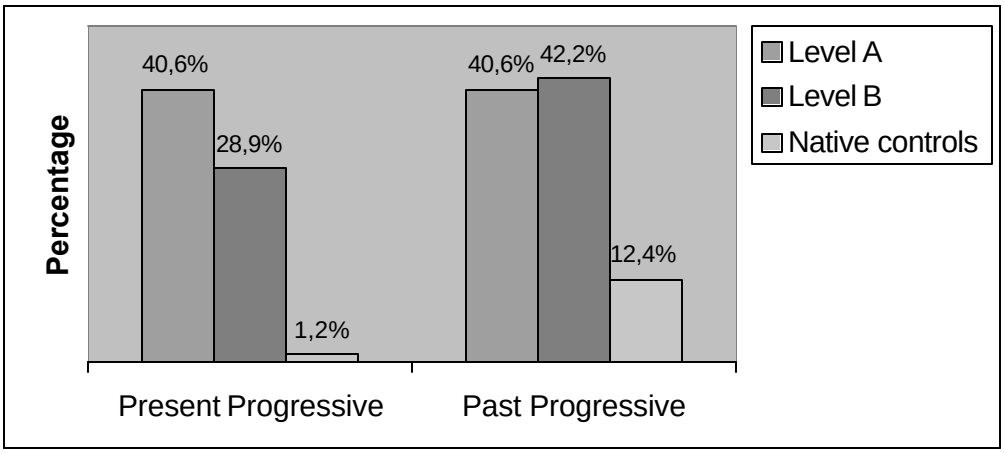


Figure 8: Percentage incorrect – acceptance of progressive forms in sentences containing stative verbs in the Preference Task (all subjects)

The results reported above clearly go against the POA hypothesis. However, they are in accordance with findings reported by Robison (1990) and Bardovi-Harlig & Reynolds (1995), among others[46], who found some overextension of progressive marking onto stative verbs in the Interlanguage of English learners.

4.2.5 Association of third person singular marking with states

In the Preference Task, this aspect prediction would be endorsed in case beginning learners showed more errors in past stative sentences than in

[46] See Chapter 2 for a detailed discussion.

past sentences containing verbs from other classes. That means, for example, that target past sentences, such as (116a), (116b), (116c), and (116d), should not present similar acceptance rate. In particular, lower level learners should incorrectly select the present form ***loves*** in (116a) more often than the incorrect forms ***rides***, ***paints***, and ***starts***, in sentences (116b), (116c), and (116d) respectively.

(116) a. Last Friday, Margaret's boss gave a party. It was the second anniversary of the company. Margaret ***loves / loved*** the party, the music and the cake.

b. My Uncle Mario is very old now. He doesn't exercise anymore. He's 98. But as a young man he ***rides / rode*** a bicycle very well.

c. Last Sunday, my husband was very tired. In the morning, he cut the grass. Then, he ***paints / painted*** the whole garage. After that, he took care of the flowers.

d. Yesterday, Greg's boss was very mad at him. They had an important meeting at work. The boss ***started / starts*** the meeting at 2 o'clock. But Gregg only arrived at the office at 3: 30.

The results that came out of the statistical analysis related to this particular prediction are the most unpredictable and therefore interesting so far. A significant difference was actually found in the case of lower level learners, but not in the case of more advanced learners, with respect to number of correct responses for target past tense sentences across aspectual classes (Level A ($F(3,88)=5.061$, $p=0.002$); Level B ($F(3,116)=2.462$, $p=0.065$)). At first glance, such a result seems a clear validation of the POA hypothesis. However,

a closer examination of these data reveals an interesting fact. Even though learners had more errors in stative sentences than in accomplishment and achievement sentences, thus following the prediction, both experimental groups (Level A and B) showed the lowest scores for activity sentences, a result that seriously contradicts the aspect hypothesis. Table 11 below gives the raw numbers as well as percentages of rejection of ungrammatical present tense forms in past tense contexts for all groups across aspectual classes. Figures 9, 10, and 11 show the percentages for the two experimental groups as well as for the native controls.

Table 11: Correct responses – rejection of ungrammatical present tense forms in target past tense contexts by verb category in the Preference Task (all subjects)

		States	Activities	Accomplishments	Achievements
Level A	Mean correct	2.22	1.91	2.52	2.74
	Total scores	51	44	58	63
	Percentage	*74%*	*64%*	*84%*	*91%*
Level B	Mean correct	2.67	2.5	2.77	2.84
	Total scores	80	75	83	85
	Percentage	*89%*	*84%*	*92%*	*94%*
Native controls	Mean correct	2.96	3	3	3
	Total scores	80	81	81	81
	Percentage	*98.8%*	*100%*	*100%*	*100%*

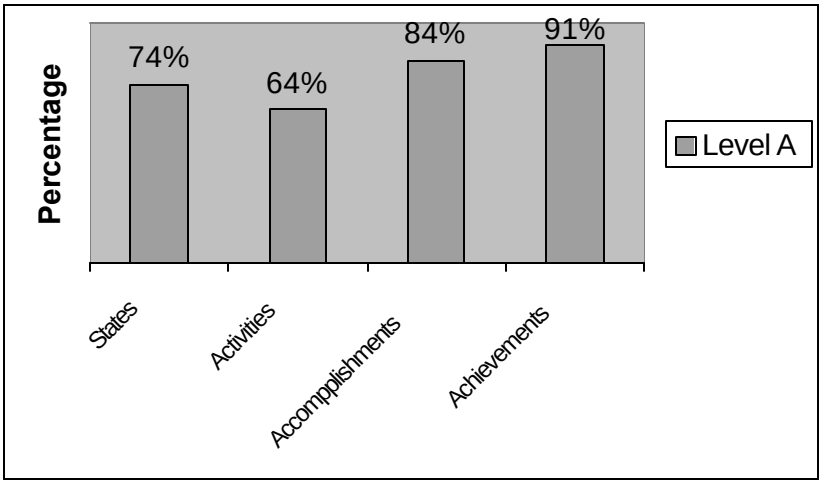


Figure 9: Percentage correct – rejection of ungrammatical present tense forms in target past tense contexts by verb category in the Preference Task (Level A)

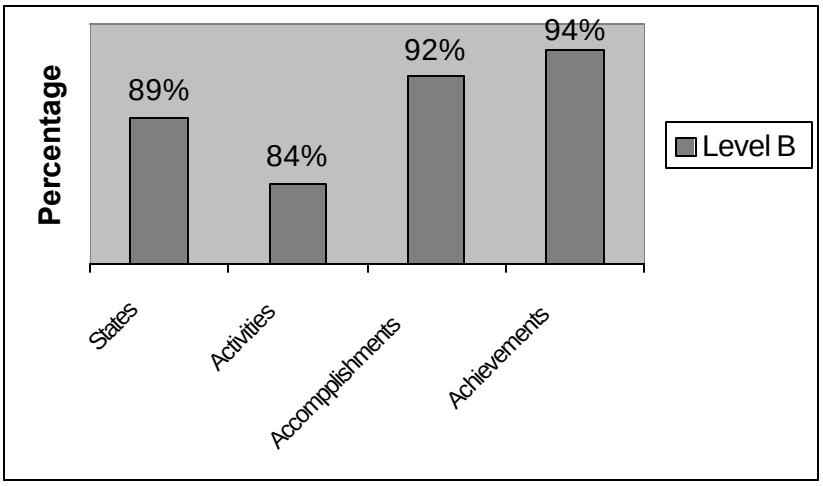


Figure 10: Percentage correct – rejection of ungrammatical present tense forms in target past tense contexts by verb category in the Preference Task (Level B)

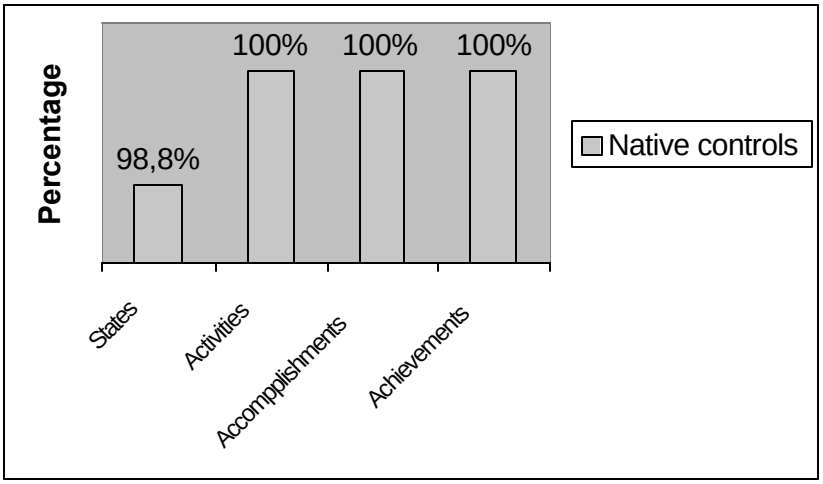


Figure 11: Percentage correct – rejection of ungrammatical present tense forms in target past tense contexts by verb category in the Preference Task (native controls)

In brief, the most reasonable conclusion to be drawn from the evidence presented above is that the aspect hypothesis does not seem to have found confirmation in the case of the learners tested in Preference Task. In the next section, I analyze the data regarding the Elicited Production Task.

4.3 Elicited Production Task

4.3.1 Overall results

The analysis performed on the production data considered whether subjects behaved according to the aspect predictions. I will begin by reporting overall results, followed by the examination of the data concerning the use of perfective marking in achievement and accomplishment verbs. Next, I will

introduce the evidence regarding the use of progressive marking on activity verbs. Then, the prediction relative to the non-target-like association of the progressive inflection to stative verbs will be described. Finally, findings related to the affiliation of the third person marking with states will be analyzed.

Table 12: Overall acceptance of the POA hypothesis in the Elicited Production Task (all subjects)

	Level A	Level B	Native controls
Total obligatory contexts	644	840	756
Corroborating responses	177	275	312
Percentage	*27.5%*	*32.7%*	*41.3%*
Mean average acceptance of POA hypothesis	7.69	9.17	11.56
Base form (no inflection)	218	172	0
Percentage	*33.8%*	*20.5%*	*0%*

The first analysis that was done was an overall count of responses that followed the aspect hypothesis predictions. In order to do that, I considered the total number of test items in which obligatory contexts were provided (28), and the number of subjects who participated in each one of the groups tested: Level A (23), Level B (30), and Control group (27). The first row in Table 12 below represents the total number of obligatory contexts for each group. The scores in the second row refer to the total number of responses corroborating the POA hypothesis, i.e., in our case, the aspect predictions. Rows three and

four show the percentage of those corroborating responses and the mean average acceptance of the POA hypothesis respectively. Finally, row five presents the total number of verbs that have been used in their base form in the production task, i.e., verbs to which no inflectional marking was attached, as well as the percentage rates at which these forms were selected by subjects.

Interestingly, the data shows that the highest rate of responses that followed the specific aspect predictions was given by learners from Level B and native speakers, and not by learners from Level A, as it was expected. Nevertheless, a more careful look at the data reveals that the picture is a lot more complex. As it happens, the instrument contained many sentences in which the adverb favored the prediction. To illustrate, due to the fact that sentences involving accomplishment and achievement verbs also included time adverbs (for instance, *last week*), it is impossible for us to know to what extent learners actually followed the predictions unless those sentences are excluded from the analysis. Moreover, that may be the reason why more advanced learners and native speakers showed a higher score of responses corroborating the aspect predictions.

When we extract out those sentences in which the adverb favored the prediction from the analysis, the results are as follows. As shown in Table 13, out of a total number of 345 occasions, participants from Level A had a score of 50 corroborating responses (14.5%), whereas participants from Level B had 51 corroborating responses out of 450 (11.33%). Native speakers had only 11 responses which followed the prediction (2.72%) in 405 possible occasions.

Table 13: Overall acceptance of the POA hypothesis in the Elicited Production Task (all subjects)

	Level A	Level B	Native controls
Total obligatory contexts	345	450	405
Corroborating responses	50	51	11
Percentage	*14.5%*	*11.33%*	*2.72%*

In the following sections, I will present and analyze the evidence regarding each of the particular predictions introduced in Chapter 3.

4.3.2 Association of perfective marking with achievements and accomplishments

In the investigation of the hypothesis concerning overspreading of perfective marking, I first considered those sentences in which past tense contexts were presented. The analysis involved a comparison between achievement and accomplishment sentences, such as such as (117a) and (117b), and activity sentences, such as (117c) below. We should find more correct responses (i.e., use of the *–ed/IRREG* inflection) with accomplishments and achievements than with activities for the aspect hypothesis to be corroborated.

(117) a. Last week, the famous doctor _____ at Annex Hospital. (to start a job)

b. Last Sunday, Mary's husband _____ and the kitchen with their son. (to paint the garage)

c. Yesterday, the girl _____ with some friends at school. (to study French History)

When this specific prediction was put to test, I found that, out of 46 obligatory contexts for the use of past tense forms, Level A subjects had a score of 24 (52.2%) correct responses for achievement sentences, 28 (60.9%) for accomplishment sentences, and 26 (56.6%) for activity sentences. An Analysis of Variance performed on these figures revealed no significant difference across the three groups of sentences ($F(2,3)=0.048$, $p=0.953$). Out of a total number of 60 obligatory contexts, the informants from Level B had a score of 39 (65%) correct responses in both achievement and accomplishment sentences, and 35 (58.4%) in activity sentences. Again, no significant difference was found in the statistical test performed on the data ($F(2,3)=0.115$, $p=0.895$). As for the native speaker controls, out of 54 obligatory past tense contexts, participants had a score of 54 (100%) correct responses in sentences containing achievement and accomplishment verbs, and 51 (94.4%) in sentences containing activity predicates ($F(2,3)=9$, $p=0.0539$). Table 14 presents the figures for each group of subjects[47].

[47] Paired *t*tests were also used in the analysis. As the results found did not differ from what has already been reported, I chose not to include them here.

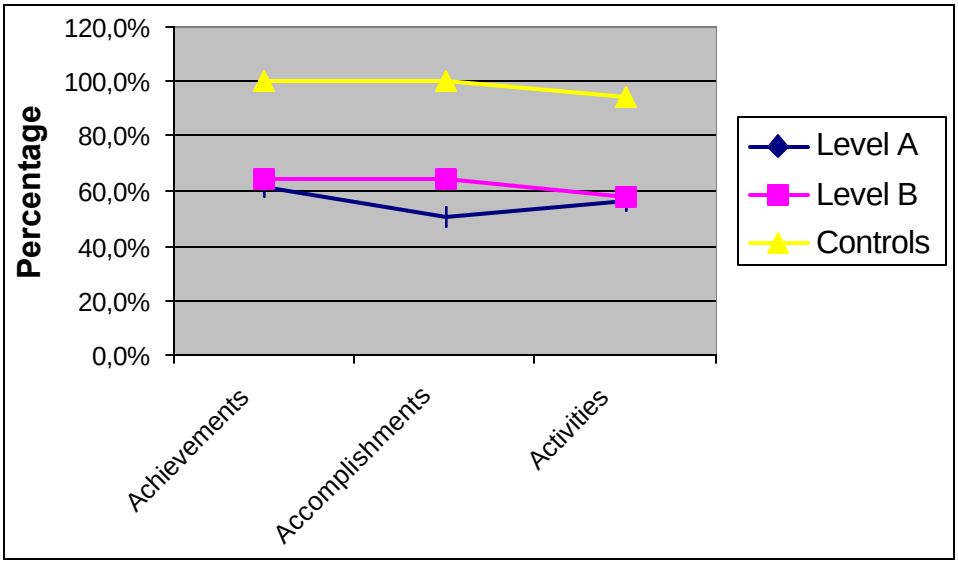
Table 14: Score correct of *–ed/IRREG* forms in target past tense contexts across verb classes in the Elicited Production Task (all subjects)

		Achievements	Accomplishments	Activities
Level A	Score correct	24	28	26
	Percentage	*52.2%*	*60.9%*	*56.5%*
Level B	Score correct	39	39	35
	Percentage	*65%*	*65%*	*58.4%*
Controls	Score correct	54	54	51
	Percentage	*100%*	*100%*	*94.4%*

A closer look at this data reveals some very surprising facts. On the one hand, it can well be said that the prediction according to which learners should have lower scores for sentences containing activity predicates than for sentences containing achievement and accomplishment predicates was not confirmed in this study. Nevertheless, the data also reveals the appearance of a curious fact. While Level A learners did **not** show a higher score of association of *–ed/IRREG* to accomplishment predicates in comparison to activity predicates, contradicting what was predicted by the POA hypothesis, Level B learners (as well as native speaker controls) showed a slight higher use of *–ed/IRREG* marking with both accomplishments and achievements than with activities. However, the hypothesis is at risk here, as such a fact was not

predicted to happen in the case of more advanced learners. Figure 12 below plots a comparison between the three groups of subjects.

Figure 12: Percentage score correct of *–ed/IRREG* forms in target past tense contexts across verb classes in the Elicited Production Task (all subjects)



However, these findings deserve some cautionary remarks. As already pointed out above, the fact that time adverbs were included in the test sentences may have exerted some influence over the forms chosen by the subjects. In particular, in the sentences considered in the analysis just presented, the time adverbs selected clearly favor the predicted behavior: use of *–ed* with accomplishments and achievements, but not with activities. As a consequence, further inquiry into this matter is required.

The next step in the examination of the perfective prediction referred to the occurrence of overextension of *–ed/IRREG* marking onto accomplishment

predicates that appear in progressive contexts. For the investigation of this prediction, sentences such as (118a)–(118d) below were analyzed. In order for the POA hypothesis to be validated, lower-level learners should overextend *–ed/IRREG* morphology to sentences like (118a) and (118b), which depict accomplishment predicates, but not to sentences like (118c) and (118d), in which activity predicates are used.

(118) a. At this very moment, my brother _____ in the country. (to paint a house)

b. Last month, Tom had a heart attack while he _____ in the kitchen. (to paint the windows)

c. Look, right there, Gregory _____ with his classmates from school. (to ride a horse)

d. Last night, my friend _____ when the phone rang. (to study Russian Architecture)

Sets of paired t-tests done on the results show no significant difference between the production rate of *–ed/IRREG* in sentences containing accomplishment verbs and sentences containing activity predicates for all learners. As Table 15 below shows, out of a total number of 46 possible contexts, Level A learners had only 3 (6.5%) occurrences of *–ed/IRREG* attached to accomplishment verbs in present progressive in comparison to 1 (2.2%) occurrence of *–ed/IRREG* attached to activity verbs (t (1)=1, p=0.499). Learners from Level B present similar rates in present progressive contexts: out of 60 possible contexts, participants had 3 (5%) occurrences of *–ed/IRREG* affiliated with accomplishment predicates, and only 1 (1.67%) occurrence of –

ed/IRREG attached to an activity verb. Again, no statistical difference was found (t (1)=1, p=0.499). Native speaker controls did not attach *–ed/IRREG* to either accomplishment or activity verbs.

In the case of past progressive contexts, however, results are a little different, as more cases of use of *–ed/IRREG* were found in all three groups. In a total number of 46 sentences, Level A subjects had 17 (36.9%) uses of *–ed/IRREG* with accomplishments in comparison to 15 (32.6%) with activities. Level B subjects had 21 (35%) uses of *–ed/IRREG* with accomplishments and 15 (25%) with activities out of a total number of 60. Native speakers, in 54 sentences, had 7 (13%) occurrences of *–ed/IRREG* morphology attached to accomplishments and 4 (7.41%) occurrences of the perfective marking with activities. It is interesting to note that, in spite of the higher rate of association of the perfective marking to accomplishment verbs in comparison to activity predicates in past progressive sentences, no significant difference was found in any of the three groups of informants: Level A (t (1)=0.25, p=0.844), Level B (t (1)=1.5, p=0.374), native speakers (t (1)=0.25, p=0.499). Figures 13 and 14 above give the percentage rates of affiliation of *–ed/IRREG* marking in target progressive contexts.

Table 15: Production rate of ungrammatical *–ed/IRREG* forms in target progressive in accomplishment and activity sentences in the Elicited Production Task (all subjects)

	Present progressive contexts		Past progressive contexts	
	Accomplishments	Activities	Accomplishments	Activities
Level A	3	1	17	15
	6.5%	*2.2%*	*36.9%*	*32.6%*
Level B	3	1	21	15
	5%	*1.67%*	*35%*	*25%*
Controls	0	0	7	4
	0%	*0%*	*13%*	*7.41%*

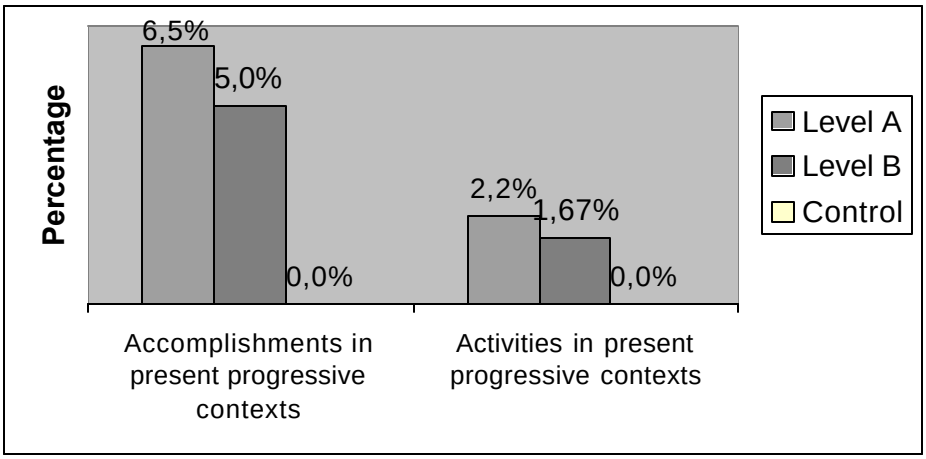


Figure 13: Percentage rate of affiliation of *–ed/IRREG* marking in target present progressive with accomplishment and activity verbs in the Elicited Production Task (all subjects)

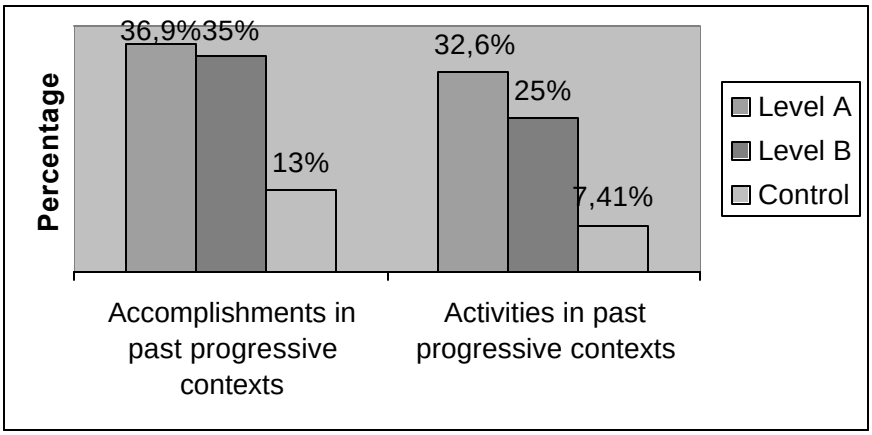


Figure 14: Percentage rate of affiliation of *–ed/IRREG* marking in target past progressive with accomplishment and activity verbs in the Elicited Production Task (all subjects)

A methodological remark needs to be made here. The surprising high rate of *–ed/IRREG* morphology attached to both accomplishment and activity predicates reported here might be a consequence of the kind of the test sentences used in the Elicited Production Task. In designing the instrument, I did try to create non-ambiguous contexts for each test item. However, the results above raise questions about my success in doing that. Let us have a closer look at some of the sentences which were marked with the perfective inflection by native speakers:

(119) a. Last year, the architect _____ a house when he lost all his money. (to build a house)

b. Last Monday, the teacher _____ his bike when he saw the accident. (to ride a bike)

It is impossible to be sure of the extent to which this fact has influenced learners in their responses. Therefore, the findings above have to be taken with caution. Still, because the production rate of the perfective inflection with accomplishments did not differ significantly from the use of perfective morphology with activities, I will maintain that the POA hypothesis related to overextension of *–ed/IRREG* to events has not found confirmation in this study.

4.3.3 Overspread of progressive marking with activities

The POA hypothesis predicted that lower level learners would demonstrate overextension of the *–ing* morpheme to activity predicates in both simple present and past contexts. That is, for the hypothesis to be validated, subjects from Level A should associate the *–ing* progressive inflection to activity verbs ((120a) and (120b)) at a higher rate than to achievement verbs (120c).

(120) a. Usually, Jessica's boyfriend _____ in his free time. (to study Greek Philosophy)

b. Yesterday morning, our Geography teacher _____ with us. (to ride her bicycle)

c. Yesterday evening, the boss _____ before the secretary. (to leave the office)

When this particular prediction was put to test, no significant difference was found for the number of sentences in which *–ing* was associated with activities in comparison to the number of sentences in which the

progressive inflection was attached to achievement verbs across the three groups. In simple present contexts, out of 46 possible occasions, subjects from Level A incorrectly attached the progressive inflection to 9 (19.6%) activity verbs and to 3 (6.52%) achievement verbs (t(1)=0.6, p=0.655). On the other hand, informants from Level B associated the *–ing* to 2 (3.34%) activity verbs and to only 1 (1.7%) achievement (out of 60 occasions) (t (1)=0.333, p=0.795). Native speakers did not incorrectly attach *–ing* to verbs in simple present contexts. In target simple past contexts, Level A learners attach the progressive morpheme to 5 (10.9%) activities and to 4 (8.7%) achievements, out of 46 occasions (t (1)=1, p=0.499). Level B learners use the progressive with 10 (16.7%) activities and 1 (1.7%) achievement, out of 60 occasions (t (1)=3, p=0.204). Interestingly, native speaker controls produced no achievement verb but 2 activity verbs (3.7%) in the progressive form, out of 54 possible situations (t (1)=1, p=0.499). See Table 16 below for these figures.

Figures 15 and 16 below show that in both cases – Level A and B – learners demonstrated a tendency of overextend the *–ing* progressive morpheme to activity verbs at a higher rate than to achievement verbs in simple tense contexts. Although no significant difference was found in the analysis, such significance may appear in a task in which more sentences testing that specific prediction are provided. In any case, this aspect hypothesis prediction was supposed to be true of lower-level learners only. Interestingly, as Figure 15 shows, learners from Level B had a higher rate of production of progressive

Table 16: Production rate of *–ing* forms in target simple tense contexts with activity and achievement verbs in the Elicited Production Task (all subjects)

	Present contexts		Past contexts	
	Activities	Achievements	Activities	Achievements
Level A	9	3	5	4
	19.6%	*6.52%*	*10.9%*	*8.7%*
Level B	2	1	10	1
	3.34%	*1.7%*	*16.7%*	*1.7%*
Controls	0	0	2	0
	0%	*0%*	*3.7%*	*0%*

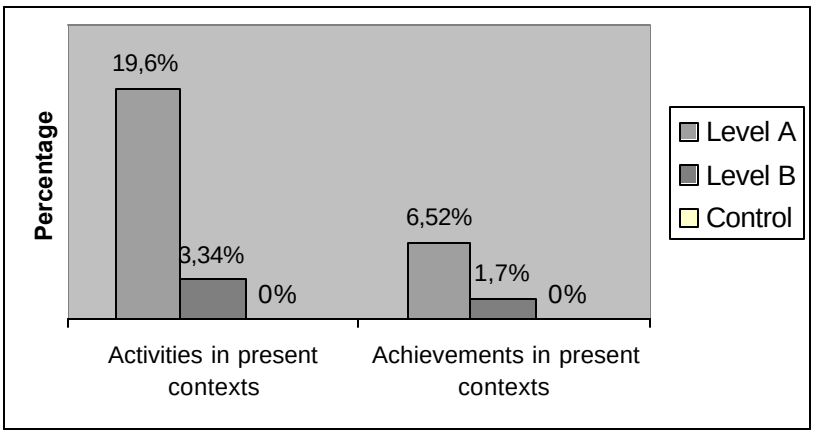


Figure 15: Percentage rate of affiliation of *–ing* in target simple present tense sentences with activities and achievements in the Elicited Production Task (Levels A and B)

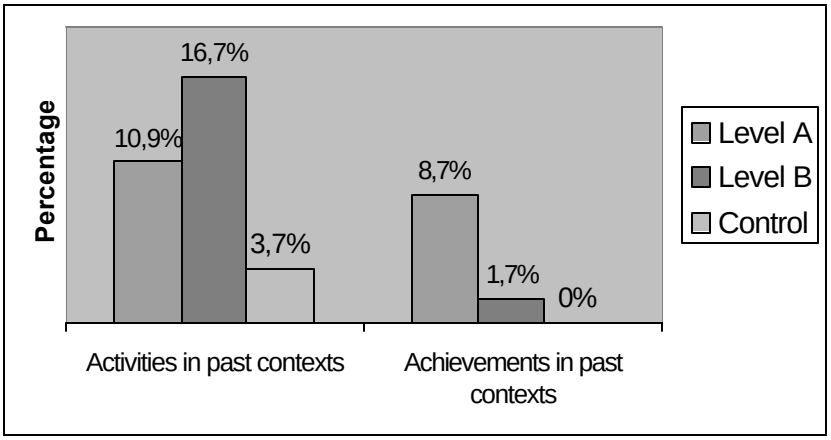


Figure 16: Percentage rate of affiliation of *–ing* in target simple past tense sentences with activities and achievements in the Elicited Production Task (Levels A and B)

marking with activities than learners from Level A, a fact that clearly goes against the predictions.

In brief, it is possible to say that even though learners showed a slight trend of attaching the progressive *–ing* inflection to activity verbs to a higher rate than to achievement verbs in simple tense contexts, no statistical significance was detected. Because the number of possible occasions in which the learners could have used the progressive morpheme was limited in the production task used in this study (2 sentences for each tense: simple present and simple past), the most sound conclusion to be drawn from these findings is to reaffirm the need of more studies in which this particular prediction be tested in a controlled experiment such as this one.

4.3.4 No occurrence of progressive marking with states

In order to investigate the prediction according to which learners would not associate the *-ing* morpheme with stative verbs, sentences such as (121a) and (121b) below, in which present and past contexts are given, were analyzed.

(121) a. Nowadays, the boy _____ written by Agatha Christie. (to love detective stories)

b. Before the last incident with her boss, the woman _____ at Sony. (to love her job)

The production task contained 8 sentences testing stative verbs, of which 4 involved present tense contexts and 4 presented past tense contexts. Out of 46 possible situations, 5 (10.9%) stative verbs received the progressive inflection in present contexts and 5 (10.9%) received the morpheme in past contexts in the case of learners from Level A. Learners from Level B used 4 (6.7%) stative progressives in the present and 8 (13.3%) in the past, out of 60 possible occasions. Table 17 and Figure 17 below present these results.

Table 17: Production rate of *–ing* forms with stative verbs in the Elicited Production Task (all subjects)

		Present tense contexts	Past tense contexts
Level A	Total score	5	5
	Percentage	*10.9%*	*10.9%*
Level B	Total score	4	8
	Percentage	*6.7%*	*13.3%*
Controls	Total score	0	0
	Percentage	*0%*	*0%*

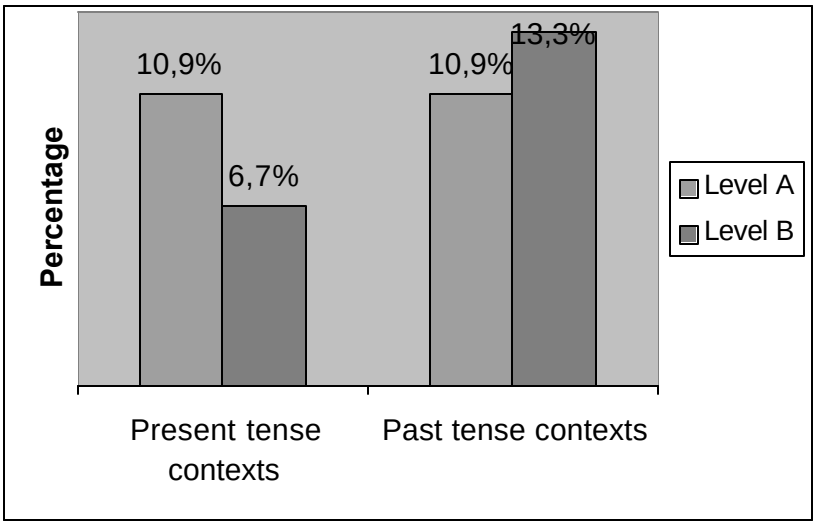


Figure 17: Percentage rate of affiliation of *–ing* with stative verbs in the Elicited Production Task (Levels A and B)

4.3.5 Association of third person singular marking with states

In order to test the POA hypothesis regarding third person singular morphology, sentences presenting stative verbs like the ones that appear under (128) below were considered. Lower-level learners were predicted to attach the *–s* morpheme to stative predicates (in sentences such as (122a)) at a higher rate than to verbs from other aspectual classes in past tense contexts (in sentences such as (122b) – (122d)).

(122) a. Last year, when Michael's wife kept telling him lies, he _____ about her. (to know the truth)

b. Yesterday, the girl _____ with some friends at school. (to study French History)

c. Two years ago, my husband _____ near the beach in Florida. (to build a condominium)

d. Yesterday evening, the boss _____ before the secretary. (to leave the office)

The number of ungrammatical responses (i.e., attachment of *–s* to states in past contexts) given by subjects for the sentences containing stative verbs were as follows (see Table 18 below). For Level A learners, out of a total number of 92 sentences, there were only 4 occurrences of *–s* ungrammatically attached to statives (4.3%), in comparison to 1 occurrence of *–s* with activities (1.1%) and 0 with accomplishments. Because there were fewer sentences involving achievement predicates (46) than with other verbs in the task (92 for each verb class), the 2 occurrences of the third person inflection associated with achievements represent 4.3% of the total number of past sentences. Thus,

although the number of cases in which the third person marking was associated with statives is a little higher than with activities and accomplishments, a further look at the achievement data reveals that the same percentage of use of *–s* that we see with statives is also true of achievements. Therefore, the evidence from Level A learners forces us to reject the POA hypothesis. Moreover, an analysis of Variance test revealed no significant difference across verb classes ($F(3,10)=1.92$, $p=0.188$).

Interestingly, Level B subjects had a higher rate of affiliation of *–s* to statives in past contexts than lower-level learners. Out of a total number of 120 past tense sentences, learners used the inflection in 9 sentences containing stative verbs (7.5%), 3 sentences containing activity verbs (2.5%), and 1 sentence containing accomplishment verbs (0.8%). There was only one occurrence of affiliation of the third person inflection with an achievement predicate, out of 60 occasions (1.7%). Despite the higher number of cases in which statives received the third person morpheme in comparison to verbs from other aspectual classes, no significant statistical difference was found ($F(3,10)=2.42$, $p=0.127$). Native speaker controls showed only one occurrence of incorrectly attaching the present morpheme to an activity verb and no use of *–s* attached to verbs from the other classes. Figure 18 plots this data.

Table 18: Production rate of *–s* in past contexts across aspectual classes in the Elicited Production Task (all subjects)

	States	Activities	Accomplishments	Achievements
Level A	4	1	0	2
	4.3%	*1.1%*	*0%*	*4.31%*
Level B	9	3	1	2
	7.5%	*2.5%*	*0.8%*	*1.7%*
Controls	0	1	0	0
	0%	*0.92%*	*0%*	*0%*

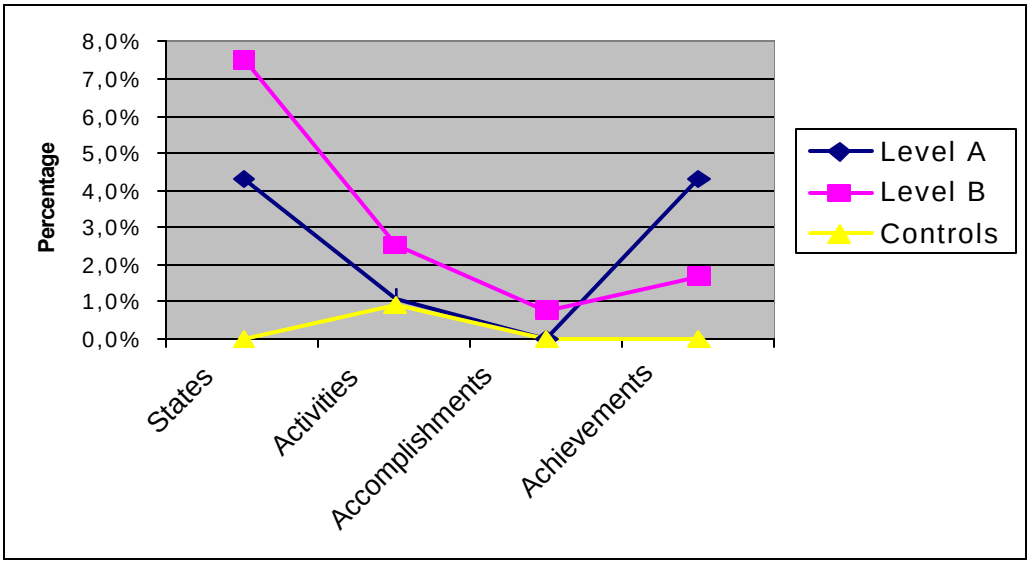


Figure 18: Percentage production rate of *–s* in past contexts across aspectual classes in the Elicited Production Task (Levels A and B)

From the evidence just presented we can conclude that the aspect prediction which holds that beginning learners normally associate the third person inflectional marker *–s* with stative verbs in the early stages did not find corroboration here. I will next discuss the results from the comparison of two tasks utilized in our investigation.

4.4 Comprehension *versus* production

In order to verify whether mode of processing affects language production of grammatical morphology, a comparison between subjects' performance in each of the two tasks was done. If there is a task effect, it is predicted that learners would have lower scores (i.e. more errors) in the production task in comparison to results in the perception task. In the comparison of results from the two tasks, a significant difference was found for both experimental groups: Level A: ($t(22)=13$, $p<0.0001$); Level B: ($t(29)=8.05$, $p<0.0001$). In the case of control subjects, no statistically significant difference was detected.

In addition, a linear relationship between the two tasks was also found in the data analysis. In other words, results from both groups of learners revealed a positive correlation that is significant at the 0.01 level (Level A: ($r(22)=0.737$, $p<0.0001$); Level B: ($r(29)=0.622$, $p<0.0001$)). In the case of native-speaker controls, no significant correlation was found ($r(26)=0.118$, $p=0.558$). That means, unlike native speakers, who presented close mean

averages in both tests (PT: 0.9859; EPT: 0.9854), English learners followed a similar trend across the two levels of proficiency. Their mean average scores were significantly higher in the Preference Task. Level A learners had a score of 0.7878 in the Preference Task and a score of 0.3898 in the Elicited Production Task. Level B learners had a score of 0.8817 in the Preference Task and a score of 0.5786 in the Elicited Production Task.

4.5 Conclusion

In sum, the evidence presented above reveals that the aspect hypothesis was not validated in the case of the learners tested in this study in either the Preference Task or the Elicited Production Task. I have already mentioned in Chapter 2 that the great majority of studies that are used to support the aspect hypothesis have relied on spontaneous methods of data collection, more specifically, longitudinal case studies and narrative studies. In this research project, I have found that once you put the aspect hypothesis to the test under highly controlled experimental conditions, it does not work. Therefore, one has to be extremely cautious about making very strong claims about the role of the inherent lexical aspect of verbs in the acquisition of interlanguage verbal morphology.

5 CONCLUSION: DISCUSSION AND IMPLICATIONS

5.1 Introduction

The aim of the study reported here was to investigate the extent to which the aspect hypothesis holds in the case of Brazilian Portuguese learners of English. According to such a hypothesis, second language learners initially use tense-aspect inflectional morphology to encode the inherent aspect of the verbs rather than target tense distinctions. My view on the issue is that, in order for us to make strong claims concerning the influence of lexical aspect on the acquisition of L2 verbal morphology, rigorous control within the experimental situation needed to be achieved. To do that, experimental techniques that establish the obligatory context for specific verb forms were adopted.

An important procedural difference between this and previous experiments concerns the use of two distinct tasks testing different levels of knowledge of the language. Both perception and production tasks aimed at testing what structures learners are capable of using in explicit contexts, instead of letting them decide what structures they prefer to employ. A further interesting characteristic of this investigation is its uniqueness in testing Brazilian Portuguese native speakers learning English as a foreign language.

This final chapter summarizes the main findings with respect to each of the aspect predictions that have been investigated in this study, suggests some possible alternative explanations for the results, directions for future research, and, finally, discusses the pedagogical implications of the study.

5.2 Summary of findings

The first aspect hypothesis put to the test involved the acquisition of perfective morphology. The POA hypothesis predicted that there would be overspreading of *–ed/IRREG* onto achievements and accomplishments in the case of lower-level learners, but not in the case of more advanced learners, in both the comprehension and production tasks. This specific prediction found no confirmation in either of the two tasks involved in this study.

In the Preference Task, overextension of *–ed/IRREG* morphology onto accomplishment and achievement verbs in target present tense and past progressive contexts was analyzed. Results show that the acceptance rate of ungrammatical forms in sentences containing achievement and accomplishment verbs was not significantly higher than the acceptance of ungrammatical forms in sentences containing activity verbs. In fact, although learners demonstrated a rather weak tendency of incorrectly associating *–ed/IRREG* morphology to accomplishments more often than to activities in past progressive contexts, thus following the prediction, in present tense contexts that tendency was not identified. In the analysis of responses for present

sentences, no significant difference across aspectual classes, and a higher error rate in activity sentences in the case of Level A learners were found. These two facts clearly go against the predictions. Interestingly, learners from Level B showed a slight trend of presenting higher scores in sentences containing activity verbs than in sentences containing accomplishment and achievement predicates in present environments. Such a finding, however, disproves the POA hypothesis for that situation was predicted to happen in the case of lower-level learners only.

A similar conclusion can be drawn from the analysis of responses from the Elicited Production Task. In the case of past tense contexts, lower-level learners were expected to have more correct responses in sentences containing accomplishments and achievements than in sentences containing activities. Statistical tests performed on the production data showed no significant difference across the three aspectual classes for any group of subjects. As for progressive contexts, both groups of participants showed a very weak tendency of incorrectly attaching *–ed/IRREG* morphology to accomplishments more often than to activities. However, no statistically significant difference in the production rate of *–ed/IRREG* across the two levels was found.

The second prediction that was put to the proof referred to the association of the *–ing* progressive morpheme with activities. The analysis presented above shows that the POA hypothesis found no validation in any of the two tasks involved in the study. The hypothesis predicted that lower level

learners would demonstrate a higher score of correct responses in sentences involving activity predicates than in sentences involving verbs from other classes in both present and past progressive contexts in the Preference Task. When sentences in present progressive contexts were examined, statistical tests demonstrated that subjects from the two groups (Level A and Level B) indeed showed a slight higher score correct with activity verbs than with accomplishment verbs, but no significant statistical difference was detected. Similarly, both groups of participants did better in sentences containing activity predicates than in sentences containing accomplishment verbs in past progressive contexts, but once more the difference was not statistically significant.

In the Elicited Production Task, Level A learners were expected to demonstrate overextension of the *–ing* morpheme to activity predicates in both simple present and past contexts by associating the *–ing* progressive inflection to activity verbs more often than to achievement verbs. Here again no significant difference was detected in the number of sentences in which *–ing* was associated with activities in comparison to the number of sentences in which the progressive inflection was attached to achievement verbs across the two groups of learners.

Concerning the third prediction – progressive marking with stative verbs – in order for the POA hypothesis to be validated, no occurrence of the progressive form of a stative verb should be found in either present or past contexts in neither task. Similarly to what has been thus far discussed, once

more the POA hypothesis was not confirmed. To examine the hypothesis, percentage scores for the use of *–ing* with statives were calculated for each group of subjects. The analysis reveals that Level A subjects preferred the *–ing* form (*is V+ing*) over the simple present form (*V+s*) of the verb in 40.6% of the sentences and also chose the past *–ing* form (*was V+ing*) in 40.6% of the sentences. Level B subjects, on the other hand, used the *–ing* form (*is V+ing*) in 28.9% of the present stative sentences, and preferred the form (*was V+ing*) in 42.2% of the past stative sentences. It is worth noting that the native speaker participants also demonstrated some association of progressive marking with stative verbs, but more in the case of past progressive sentences (1.2%), than in the case of present progressive sentences (12.4%). In the production task, in the case of learners from Level A, 10.9% of all stative verbs received the progressive inflection in present contexts and 10.9% received the morpheme in past contexts. Learners from Level B used 6.7% of stative progressives in the present, and 13.3% of stative progressives in the past.

It is interesting to notice that all participants in this study used stative progressives a lot more often in the Preference Task than in the Elicited Production Task. Such a result may be a consequence of the kinds of tests employed here. It is possible that, because in the Preference Task the structures from which individuals had to choose were presented, the presence of the ungrammatical form of the stative verb may have biased learners' responses. Unlike in the PT, no alternatives for participants' responses were given in the Elicited Production Task.

The POA hypothesis concerning the association of third person singular marking with states was also put to the test. In a similar manner, the results that came out of the analysis do not support the hypothesis. More specifically, in the Preference Task I looked for a difference in terms of error scores in simple past sentences (i.e., I expected to find more errors in past stative sentences than in past sentences containing verbs from other classes). Although a statistically significant difference was indeed found in the number of correct responses across aspectual classes (in both groups), the lowest scores were for activity sentences and not for stative sentences, as it was predicted by the hypothesis.

In the analysis of the responses from the Elicited Production Task with regard to third person singular morphology, I examined all sentences presenting stative verbs. Participants from Level A had an overall very low rate of ungrammatical association of *–s* to verbs in past contexts. In addition, even though learners attached *–s* attached to statives a little more often than to activities and accomplishments, (4.3% in comparison to 1.1% and 0%, respectively), no significant difference was found. Besides, the same percentage of use of *–s* that we see with statives (4.3%) is also true of the association of *–s* with achievements. As for individuals from Level B, the results were a little different, as a higher number of sentences in which the third person marking was associated with statives was observed (7.5% with statives, 2.5% with activities, 0.8% with accomplishments, and 1.7% with achievements). Nevertheless, in spite of the fact that stative sentences received the *–s*

morpheme more often than sentences containing verbs from other aspectual classes, no significant statistical difference was identified.

Finally, a correlation test comparing learners' correct responses in each of the two tasks was performed. I found that both groups of subjects presented significantly higher scores in the perception task in comparison to results in the production task.

5.3 Possible explanations for the results

First of all, it is crucial to emphasize the importance of adopting two tasks testing different modes of processing. Although the evidence reported here has disproved the aspect hypothesis, I have showed that error rates vary significantly in the two tasks. I believe that such a result can be explained by the fact that the two different levels of knowledge of the language – comprehension *versus* production – require distinct abilities from the learners. While a Preference Task demands more metalinguistic knowledge, and individuals are given more time to think about the sentences and analyze possible responses, an Elicited Production Task, such as the one used in this study requires more automatic behavior and is less metalinguistic. That is, unlike the comprehension task that tests more conscious knowledge, in a production task unconscious knowledge comes into play.

One of the findings of this particular study regards the use of stative progressives. The POA hypothesis predicted that stative verbs would not be used in the progressive form in neither task, in spite of the fact that stative progressives are normally allowed in Brazilian Portuguese. Interestingly, learners from Level A had 40.6% of stative progressives in the PT and 10.9% of stative affiliated with *–ing* in the EPT. Level B learners also had higher scores of association of *–ing* with stative predicates in the PT than in the EPT.

A few possible conclusions can be drawn from this data. First and foremost, recall that most studies that have supported the aspect hypothesis have relied on spontaneous data collection methods, mainly narrative studies. It is possible that those learners did not employ stative progressives simply because they were avoiding them. Second, even though some researchers did mention that L1 transfer might play a role in the acquisition of verbal morphology, very few, if any, actually provided analyses of the extent to which stative progressives are accepted in the subjects' mother tongue. It is worth pointing out that the acceptance of stative progressives in Brazilian Portuguese (the case of the learners tested in our study) was discussed in detail in Chapter 1. Third, it is also reasonable to think that there was less L1 transfer in the production task, which demanded freer production, than in the perception task, in which they were given only two choices, because in a production task lots of other processing factors come into play. In addition, although there was less L1 transfer in the EPT, it is worth noting that the number of correct responses (consequently, the mean average) was also a lot lower, because it is a more demanding task. At last, it is clear that more studies on typologically different

languages are needed in order for us to be able to make any strong claims with respect to L1 transfer in the case of progressive statives.

An alternative explanation for the evidence presented above is found in McClure's (1995, 1997, 1998). The author argues that there are mismatches across languages and that while "aspectual types are universal" (1998: 12), grammatical aspect forms may have language-specific definitions. If this is true, it follows that even though the verb *know*, a stative in English, cannot be associated with the progressive inflection in English, the verb *conhecer* allows the progressive inflection in Brazilian Portuguese due to specific characteristics of the progressive structure in this language. Thus, what may have happened in the case of the learners tested here is that they made use of the aspectual features of the verb *conhecer* in Portuguese, which accepts progressive forms, in a context that required the verb *know*, which does not take the English progressive form, wrongly assuming that the two constructions were equivalent.

Within this view, if stative verbs are really proven not to accept the progressive form in English, one could think that BP might not contain true stative verbs at all. Thus, the main problem with all the aspect studies would be the assumption that a verb or a structure when translated into another language keeps exactly the same aspectual structure (lexical and grammatical). A clear example favoring McClure's approach can be found in Japanese (1995, 1998). In this language, the *te-iru* construction is used to express progressive. However, when the morpheme is attached to a verb such as *run* ("hasiru"), it has a progressive interpretation, but when it co-occurs with some other verbs,

such as *die* (“sinu”), the resulting construction is interpreted as a perfective. In addition, there are cases in which the *te-iru* construction renders the sentence ambiguous between a progressive and a perfective interpretation (e.g., with the verb *make* (“tukut”)). McClure argues that

> there is clearly a common core of defining features which supports the idea of universal aspectual types, even if the grammatical realization of a particular class varies slightly between languages (e.g., the entailment patterns of the progressive in English versus the meaning of *te-iru* in Japanese). (1998: 13)

Under such circumstances, I maintain that a more precise description and explanation of how lexical and grammatical aspect are realized in particular languages is necessary. In addition, further characterization of their patterns of interaction is strongly required before we are able to verify if interlanguage distribution of verbal morphology is indeed guided by the inherent lexical aspect features of verbs in the early stages. If it is the case that languages present universal aspectual types of verbs, and these characterizations belong to the semantics of the languages, more work on the semantics of these languages needs to be done.

5.4 Directions for future research

The results that I have arrived at in this study clearly show that the aspect hypothesis does not hold invariably, as its defenders have insisted. At least, it did not hold in the case of the learners tested here. A few questions

arise: Are these results a consequence of the tasks utilized in this particular study? Are they due to the level of proficiency of the subjects (i.e., would the hypothesis be corroborated with learners from even lower levels of proficiency)? What is the role played by the subjects' native language? Did classroom input affect the subjects' performance?

Added to this, cross-sectional research designs are still a minority within this line of inquiry. There is certainly the need for more investigative work involving controlled experimental conditions. Furthermore, we are a long way from understanding if it is the case that learners have trouble with the L2 tense / aspect system as a whole or if there are certain functions of these target forms that are particularly difficult for a given group of learners. Also, if this is what happens, what is specific to Brazilian learners of English?

Finally, in the previous section I argued that more investigation needs to be pursued with respect to universal and language-specific features of lexical and grammatical aspect and their patterns of interaction. That is, I believe that more work on the semantics of the languages involved in the experiments focusing on second language acquisition has been shown to be essential.

5.5 Pedagogical implications

My many years in language classrooms compel me to be wary about making specific pedagogical recommendations based solely on the results from

one single population of learners from a certain classroom environment. However, a few certain observations originating from the findings can be used to suggest ways for both classroom practice and research in language teaching.

First, it is important to point out that the investigation discussed here did not involve examining how tense / aspect distinctions are actually taught in language classrooms. In fact, very little investigation has been done in this area. Also, it was not my goal to test whether the materials used give any emphasis on the acquisition of morphological marking, or even to what extent learners are exposed to authentic language in the classroom. Consequently, one of the implications for language teaching that arises from this study is the observation that more research work examining teaching and learning situations involving the acquisition of tense / aspect morphology is needed. Second language professionals are challenged to go beyond noticing that learners make errors with respect to tense / aspect marking to investigate patterns of language development.

Second, I believe that the provision of materials involving authentic language in instruction is essential. If our goal is to help learners to make the appropriate form, function, and meaning associations that are required for achieving success in the second language, exposing learners to a full range of target use of tense / aspect morphology is essential.

Finally, in the particular case of Brazilian learners of English, we have to be aware of cases of negative transfer such as the one identified here with respect to stative progressives. If it is really the case that learners show

high rates of use of progressive forms with English stative verbs, both positive and negative evidence could be used in the classroom to promote awareness regarding the nuances of this particular structure in the target language.

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APPENDIX A – Preference Task

Instructions: Read the following sentences very carefully. Circle the verb phase in italics that best completes the sentence. Please mark only one answer. You will have about 15 seconds to decide. Please do not go back to make changes on the items you have chosen. Let's practice the following sentences.

Practice sentences:

→ On Joan's next birthday, I ***will buy / bought*** her a Rolling Stones CD. I'm sure she'll enjoy it.

→ Tracy and Matt ***travels / travel*** to Holland every summer to visit their grandparents.

(1) Tomorrow, Harry will join us for lunch. He said that he is going to the doctor in the morning. Then, after that, he ***will meet / has met*** us at the mall.

(2) My neighbor is very upset. The cat that lived with her ***died / dead*** because it was very old.

(3) Angela and Daniel have just got married. They ***meet / met*** in a cruise in the Bahamas.

(4) Pat has told my wife that I wasn't with another woman in the party. In fact, lots of people have told her the same thing. As a result, she ***believes / is believing*** in me.

(5) - Two days ago that famous TV director got shot in Los Angeles. What was his last project?
- He ***was producing / produced*** a new talk show for the station when he was murdered.

(6) (the phone rings)
- Is Vanessa there right now?
- I'm sorry, but Vanessa is not home. She ***studies / is studying*** Geography in the library.

(7) - Does your brother have a car?
- No, he doesn't. He ***rode / rides*** a motorcycle.

(8) Last Tuesday, Fred failed the Math exam. I can't understand why. He ***knew / knows*** all the answers to the test that day. Perhaps he was too nervous!

(9) John's father lives in New Zealand. He is an engineer but at the moment he's unemployed. He ***built / was building*** a bridge there when he got fired.

(10) Yesterday, Greg's boss was very mad at him. They had an important meeting at work. The boss ***started / starts*** the meeting at 2 o'clock. But Gregg only arrived at the office at 3: 30.

(11) - Why is your boy so excited today?
- We are going to the movies together to watch 'Pokémon'. He ***loved / loves*** movies with a lot of action.

(12) - Where are your children going to school at the moment?

- Amanda and Gabriel go to Rosario school. Daniel ***studies / studied*** at Farroupilha school.

(13) When Helen called me in the middle of the night, she was very upset. She had just found out Peter had stolen money from her. She ***was knowing / knew*** the truth about Peter's secret business.

(14) Last Sunday, my husband was very tired. In the morning, he cut the grass. Then, he ***paints / painted*** the whole garage. After that, he took care of the flowers.

(15) - Where is Ernie? Is he at home now?
- No, he ***is playing / plays*** baseball in the park with some neighbors.

(16) - John's brother is in NYC.
- What's he doing there?
- He ***is producing / produces*** a new Broadway musical.

(17) Every summer, when Jane takes her little boy to the beach, he has a wonderful time. He plays with his friends a lot. Every day, he ***builds/ built*** a sandcastle with them.

(18) My daughter Joyce has always loved the Christmas season. She still gets very excited with the gifts and parties. She ***believed / believes*** in Santa Claus when she was a little child.

(19) - Did Larry study for his test yesterday morning?
- His mother told me that he did. He ***studied / was studying*** when she phoned him.

(20) Harry's wife is a very productive artist. She makes a lot of money too. At the moment, she ***paints / painted*** a new picture every month.

(21) Beth was in her grandma's farm when she got sick with the flu. I think she got wet in the rain. She ***was riding / rode*** a horse when it started to rain. She was all wet when she got home.

(22) - I would like to eat at Giovanni's. It's 6:30 now. Does anyone know if the restaurant is open?
- Yes, Giovanni ***opened / opens*** his restaurant at 5:00 every day.

(23) Last weekend my parents got a new dog called Buddy. They are crazy for him. My father ***built / builds*** a very nice house for Buddy.

(24) - What does your husband usually do?
- He is an investor. Every year, he ***produced / produces*** a new musical on Broadway.

(25) - Danielle usually plays tennis on Tuesdays.
- What time does she start her tennis lesson?
- She ***started / starts*** the lesson at 3 o'clock.

(26) - What's Gail doing now? Is she at home?
- She ***rides / is riding*** her bike with some friends in the park.

(27) - How old is your daughter?
- She is just 6 years old. She still ***believed / believes*** in the Easter Bunny.

(28) Last Sunday, I went to visit my grandmother and some of her old friends were there. She loves card games. She ***played / was playing*** canasta with them when I arrived.

(29) Darlene is always very punctual. She is the first one to arrive at the office. She ***leaves / left*** home very early in the morning every day.

(30) (at night) Fred went to the gym in the afternoon. Now he is very tired. He ***played / plays*** basketball with his friends.

(31) The famous lawyer is now at his beach house. He's worried about the trial. He ***builds / is building*** a strong defense for his client.

(32) At first, the nurse was worried with me. She thought I didn't like what she said in the meeting. She ***was believing / believed*** I was angry with her. But when I talked to her on the phone, she finally understood my point-of-view.

(33) - Are you sure Peter and you will not get lost?
- Don't worry! Your husband has told Peter how to get to your house. Peter ***knows / is knowing*** the way now.

(34) Last Friday, Margaret's boss gave a party. It was the second anniversary of the company. Margaret ***loves / loved*** the party, the music and the cake.

(35) Jeremy's parents are very upset with him. I think that Jeremy ***wrote / written*** a letter to them telling them that he has a new girlfriend.

(36) Last Tuesday, Roger had a meeting with his boss at the office very early. He didn't want to be late. So, he ***leaves / left*** home at seven o'clock in the morning!

(37) On Wednesday afternoon, Dianne had a Portuguese test at school. It was difficult but she thinks that she got a good grade because she was prepared. She ***studies / studied*** hard for the test in the library.

(38) I'm so sorry Ms. Bellow was fired. I can't believe she was caught using drugs. My daughter ***loved / was loving*** her classes when the incident happened. I hope the new second grade teacher is as nice as she was.

(39) Did you read the news about the manager of Universal Studios? He ***produces / produced*** 750 new movies when he was at Paramount Pictures.

(40) (two teenagers talking)
- Let's play soccer.
- I'm sorry, but I can't right now. My father ***paints / is painting*** the new garage. If I go in there now to get the football, he'll ask for help.

(41) - I heard that last week Anne lost the keys to her apartment. How did she get into her house?
- She ***opened / opens*** the door with her mother's keys.
- I didn't know that her mother also had the keys!

(42) Jane and her daughter ***go / goes*** to the market every Wednesday to buy groceries.

(43) - Helen's traveling to Germany next week.
- Does she know anyone there?
- Yes, she does. She ***knows / knew*** a lot of people there. She'll stay with some friends in Munich.

(44) At first, I was afraid my son would have problems adapting to the new school. But I am relieved. He ***is loving / loves*** the new teacher. And he enjoys playing with his new classmates too.

(45) Jerry loves sports. Every Sunday he goes to the club with his friends. He ***plays / played*** soccer and baseball there.

(46) - What happened to Victor? Did he have a car accident?
- Nothing very serious. He ***painted / was painting*** the kitchen walls when he hurt his back. He fell off the ladder but he'll be fine in a couple of days, the doctor said.

(47) My Uncle Mario is very old now. He doesn't exercise anymore. He's 98. But as a young man he ***rides / rode*** a bicycle very well.

APPENDIX B – Elicited Production Task

Instructions: Read each sentence very carefully. After you have read the sentence, read the words that are inside the parentheses. You should then read the sentence aloud, filling in the blanks with the correct verb tense.

Practice sentences:

→ In the future, the taxi driver _____ because his old one is broken. (to buy a new car)

→ Because of a headache, last Friday Sarah _____ before class. (to take an aspirin)

(1) I think Mark and Andy _____ at school tomorrow. (to have a fight)

(2) Angela _____ downtown this Friday. (to see a doctor)

(3) David and his wife _____ from their trip to France. (to bring nice souvenirs)

(4) Right now, the old woman _____ to talk to because she feels lonely. (to need some friends)

(5) Every day, Emily's son _____ with his new classmates from school. (to ride a bike)

(6) Yesterday, Karen's dog _____ before the visit to the vet. (to need a bath)

(7) Last week, the famous doctor _____ at Annex Hospital. (to start a job)

(8) Nowadays, the boy _____ written by Agatha Christie. (to love detective stories)

(9) Usually, Jessica's boyfriend _____ in his free time. (to study Greek Philosophy)

(10) Last month, the teacher told the students that she _____ from them. (to want better results)

(11) At this very moment, my brother _____ in the country. (to paint a house)

(12) Yesterday evening, the boss _____ before the secretary. (to leave the office)

(13) Last year, the architect _____ when he lost all his money. (to build a house)

(14) My neighbor _____ and romantic movies on TV. (to love old comedies)

(15) Last Monday, the teacher _____ when he saw the accident. (to ride his bike)

(16) Yesterday, the girl _____ with some friends at school. (to study French History)

(17) Since last Friday, because of the scandal, my father _____ about Betty's job. (to know the truth)

(18) When you _____, please tell her that I send her my best. (to see Anne's mother)

(19) Two years ago, my husband _____ near the beach in Florida. (to build a condominium)

(20) Last night, my friend _____ when the phone rang. (to study Russian Architecture)

(21) Before the last incident with her boss, the woman _____ at Sony. (to love her job)

(22) When she was seven years old, Margaret's youngest sister _____ very well. (to know that song)

(23) Last Sunday, Mary's husband _____ and the kitchen with their son. (to paint the garage)

(24) Right now, the baby is crying because he _____ and a diaper change. (to want more milk)

(25) Yesterday morning, our Geography teacher _____ with us. (to ride her bicycle)

(26) Every year, the famous engineer _____ in the suburbs. (to build a mansion)

(27) Last year, when Michael's wife kept telling him lies, he _____ about her. (to know the truth)

(28) Now, every week, the famous artist _____for the gallery. (to paint a picture)

(29) Look, right there, Gregory _____ with his classmates from school. (to ride a horse)

(30) Kim said that she _____ for the party after school tomorrow. (to buy new clothes)

(31) These days, my boyfriend already _____ and the CDs that I like. (to know the songs)

(32) Last month, Tom had a heart attack while he _____ in the kitchen. (to paint the windows)

(33) Every day, my sister _____ at 7:30 in the morning to go to work. (to leave her home)

(34) Last Christmas, Anthony's daughter _____ at the country club. (to love the party)

(35) Right now, the girl _____ at the library. (to study English Literature)

(36) Every morning, without exception, the teacher _____ at 9 o'clock. (to start the class)

(37) At the moment, my neighbor's husband _____ in Uruguay. (to build a bridge)

(38) Francine _____ about her new job at Compaq. (to be very excited)

APPENDIX C - Michigan Placement Test

APPENDIX D – Consent form

Aos participantes:

Por favor, leia os parágrafos a seguir e assine na linha abaixo, indicando que você entende a natureza deste estudo e seus direitos como participante.

Sua participação neste estudo é voluntária. Neste estudo, você irá realizar dois tipos de tarefas. Na primeira, você irá ler sentenças e circular ou sublinhar a expressão que melhor completa a frase. Na segunda atividade, que acontecerá no laboratório, você lerá sentenças que serão gravadas numa fita cassete. O objetivo deste estudo é analisar o processo de aquisição de certas estruturas do inglês por falantes nativos do português brasileiro. Vale ressaltar, ainda, que este não é um teste de inteligência, mas sim um instrumento de avaliação de determinadas intuições que aprendizes do inglês desenvolvem durante o processo de aquisição. Além disso, o estudo não envolve risco algum. Todos os resultados coletados durante sua participação serão codificados com um número de identificação, ou seja, seu nome não será divulgado.

Eu li e entendi a informação acima a respeito deste estudo e concordo em participar.

_____ _____ _____
NOME ASSINATURA DATA

Por favor, responda as questões a seguir a seu respeito:

(a) Idade: _____ Sexo: _____

(b) Grau de escolaridade: ( ) 1°grau ( ) 2°grau ( ) 3° grau incompleto
( ) 3°grau completo ( ) pós-graduação

(c) Sua língua nativa (isto é, todas as línguas que você aprendeu antes dos seis anos de idade e que você fala fluentemente): _____

(d) Você fala outras línguas além do inglês? _____ Quais?_____
Em que ocasiões? _____

(e) Qual a sua profissão? _____

(f) Você utiliza o inglês no seu local de trabalho? _____
Com que freqüência?
( ) sempre ( ) freqüentemente ( ) às vezes ( ) raramente

(g) Com que idade você começou a estudar inglês? _____

(h) Há quantos anos você estuda inglês? _____

(i) Você já morou no exterior? _____ Em que país? _____
Por quanto tempo? _____

(j) Você já viajou para o exterior? _____ Quantas vezes? _____
Onde? _____ Por quanto tempo? _____

(k) Com que freqüência você fala inglês?

( ) sempre ( ) freqüentemente ( ) só nas aulas ( ) às vezes ( ) raramente

(l) Você utiliza o inglês em seus momentos de lazer? _____

Em que atividades?

( ) internet ( ) cinema/televisão ( ) leitura de livros/revistas

( ) outros _____

(m) Por que você estuda inglês?

_____

_____

Muito obrigada pela sua participação!!!

APPENDIX E - VOCABULARY PRACTICE

beach house
boss
card games
Christmas season
classmates
condominium
cruise in the Bahamas
daughter
diaper change
Easter Bunny
farm
gifts
good grade
grandma
grass
groceries
headache
heart attack
incident
keys
lawyer
manager
mansion
neighbor
nurse
sandcastles
Santa Claus
scandal
souvenirs
suburbs
talk show
the flu
the gym
the mall
the trial

angry
crazy
early
late
lost
punctual
stolen
unemployed

to be afraid
to be caught using drugs
to be relieved
to bring
to build a bridge
to fall off the ladder
to feel lonely
to find out
to get fired
to get lost
to get shot
to get sick
to get wet
to have a fight
to join us for lunch
to know the truth
to leave her home
to leave the office
to start a job
to want better results
to watch
to fail – failed
to fall – fell
to lose – lost
to ring – rang
to see – saw
to think – thought
to tell – told
to understand – understood
written by Agatha Christie
He hurt his back.
He is crying.
He was murdered.
She kept telling him lies.

already
at this very moment
free time
nowadays
perhaps
since last Friday
together
without exception