Telicity and the Syntax-Semantics of the Object and Subject

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DEDICATION

To Vidal and Joaquina, and to Brett

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ABSTRACT

TELICITY AND THE SYNTAX-SEMANTICS OF THE OBJECT AND SUBJECT

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This dissertation presents a study on the acquisition of telicity by Spanish and English native speakers. In addition to the study of acquisition, it investigates the syntactic and semantic properties of locatum constructions (e.g., *the water filled the bucket*), which are sentences that contain two internal arguments and whose subject is non-agentive. This dissertation explores the syntactic and semantic properties of elements of the verb phrase that had not been previously considered in the interpretation of telicity, such as the role of non-agentive subjects and the type of movement that takes place in the checking of the verb's telic features.

Contrary to the assumption that only the direct internal argument of the verb can delimit an event, I argue that objects generated in the lower verb phrase, by virtue of being an internal argument of the verb can delimit an event. An object delimits an event by checking the verb's telic features in spec-AspP, either by covert or overt movement. If a predicate contains one internal argument (e.g., *the boy filled the bucket*) the checking of the verb's telic features takes place via covert movement. That is, only the NPs specific quantification features move covertly to check the verb's telic features in spec-

AspP. However, if the predicate contains two internal arguments (e.g., *fill the bucket with water*), the surfaced subject (e.g., *the water filled the bucket*) by virtue of being an internal argument of the verb, checks the verb's telic features as the category and its features move overtly to subject position.

The study shows that young children understand telicity when the verb's telic features are checked via overt movement, but have difficulties understanding telicity when the verb's telic features are checked via covert movement. I propose that predicates whose telicity involves overt movement should be acquired earlier than predicates whose telicity involves covert movement because overt movement is an operation that happens between D-structure and S-structure before the sentence is pronounced. Predicates whose telicity involves covert movement might be acquired at a later age of development because covert movement happens between S-structure and LF after the sentence is pronounced.

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CHAPTER 1

RELEVANCE OF THE STUDY AND THEORETICAL SCOPE

This chapter presents the theoretical assumptions followed in the thesis and discusses the relevance of the study in terms of acquisition and in terms of syntactic theory. The chapter also presents a background on the lexical-semantic accounts that analyzed the representation of verb meaning as a complex structural event.

1.1 Introduction

The goal of this dissertation is to present a study on the acquisition of telicity by Spanish and English native learners and to address some of the linguistic developments that take place in children's acquisition of telicity. I propose that young children are sensitive to syntactic movement and use syntax to determine the semantic properties of telic predicates. I argue that the direct object is not the only entity that delimits the event. Instead, any internal argument of the verb can delimit the event. The verb's internal arguments delimit the event by checking the verb's telic feature via movement, either as a direct object (covert movement) or as an underlying object that surfaces in subject position (overt movement). In particular, I argue that the type of syntactic movement, overt vs. covert, undertaken by the object to check the verb's telic features plays a significant role in children's linguistic development of telicity. Hence, this study advances the research in language acquisition by showing that young learners of English and Spanish understand telicity before the age of five by attending to syntactic markers such as overt movement. In addition, the research presented here advances the investigation of event structure by proposing an analysis on elements of the verb phrase

that had not been previously considered in the interpretation of telicity, thus this study opens the door for exploration of new structures in the syntax-semantics of the verb phrase, but in particular in the analysis of the compositional interpretation of telic predicates.

1.2 Theoretical Scope

Following previous studies (Vendler 1957; Verkuyl 1972; Dowty 1979; Tenny 1987, 1994 among others) on the semantics and syntax of telicity in the English verb phrase, I will assume that the interpretation of telic predicates is compositional, that is, it is dependent on the type of verb and the specific quantificational properties of a noun phrase (a count NP) as it assumes the role of direct object. The research presented here argues that any internal argument of the verb can delimit an event and not just the direct internal argument as previously claimed in the literature (Tenny 1987, 1994).

I follow Hale and Keyser's (1998) proposal on argument structure of transitive verbs of location or placement (e.g., *put the books on the shelf*), which claims that the prepositional phrase of these verbs is internal to the lexical configuration of the verb, i.e., the PP is lexically an internal argument of the verb. I propose that objects generated in the lower verb phrase (e.g., *fill the bucket with water*), by virtue of being an internal argument of the verb, delimit the event as they move to subject position (e.g., *the water filled the bucket*). Assuming the analysis in which the verb's telic features are checked in syntactic positions related to functional categories, a predicate is interpreted as telic when the verb's telic features are checked in spec-AspP via covert or overt movement (Tenny 1987, 1994, Borer 1994, van Hout 1996 and others). If the predicate contains only one internal argument (e.g., *the boy filled the bucket*), then only the NPs cardinality features

move covertly to check the verb's telic feature and telicity is interpreted at LF; but if the predicate contains two internal arguments, (e.g., *fill the bucket with water*) the surfaced subject by virtue of being an internal argument of the verb checks the verb's telic features as it moves overtly to subject position (e.g., *the water filled the bucket*).

I propose that when the subject is an underlying object, the properties of specific quantification of the direct object considered in the literature as a key determinant in the interpretation of telic predicates, do not play a significant role (e.g., *the water filled buckets in one minute/*for one minute*), suggesting that the interpretation of telicity is not solely based by the direct object or by the properties of the direct object.

Previous studies on children's acquisition of telicity in English, Finnish, and Dutch (Weist et al. 1991, 1997; van Hout 1997, 1998a, and b; Wagner 1997, 2002 among others) claim that young children up to the age of five have difficulties comprehending the difference between telic predicates (e.g., *Mary ate the cake*) and atelic predicates (e.g., *Mary ate cake*) because they do not recognize that count nouns function as markers of telicity in languages like English and Dutch, or because they do not recognize that the NP's Case marking system functions as a telic marker in languages like Finnish. I will argue that children younger than five are able to attend to syntactic movement and determine the telicity of predicates. By using sentences of the locatum type (e.g., *the soap cleaned the stain, the water filled the bucket*), which are constructions that contain two internal arguments, one serving as an oblique subject and the other as a direct object, this study shows that children as young as 3;9 years of age understand telicity in these types of construction when the direct object is a count noun. The study suggests that children distinguish telic predicates based on the type of movement the

object undertakes to check the verb's telic features, and that the properties of the direct object do not play a significant role in the interpretation of telicity. The study also suggests future directions in testing children's acquisition of telicity as well as research on event structure in general such as the investigation of movement as a telic marker in unaccusatives, locatum constructions, and passives, which are structures whose interpretation patterns like the interpretation of telic predicates. I propose that children should perform well in interpreting these predicates as complete events since the underlying object moves to subject position, and as such it is able to check the verb's telic features overtly.

1.3 The Study of Aspect

Languages encode the expression of time by two major grammatical systems, tense and aspect. The ability to express and comprehend temporal concepts like tense and aspect is one of the earliest tasks that children perform in acquiring a first language. Therefore, the study of aspect is of great theoretical relevance because it comprises the relationship between grammar and cognitive development. Since tense and aspect are functional categories that involve the interface of syntactic and semantic levels of grammar, research on its development informs us how functional categories emerge and develop, and tells us about the underlying processes that lead to the acquisition of the syntactic and semantic properties of the language.

A great body of research on the acquisition of tense and aspect has provided insightful information on children's early development of temporal reference and temporal order. Among some of the information revealed through the investigation of tense and aspect is the emergence of verb argument structure, word order, verb

movement, and knowledge of the interpretative properties associated with event structure. Additionally, research on the acquisition of the morphosyntactic properties of tense has provided crucial information on how the instantiation of finiteness is developed and acquired. Finally, since languages encode the expression of time and the internal properties of the verb phrase in different ways, cross linguistic study of tense and aspect provides information on how languages select functional categories and feature values, which in turn is a fundamental tool in advancing the research on the acquisition of second languages.

Most of this research has focused on children's production of tense and aspect and has shown that children's early production of verb forms differs according to the morphological marking of the language: children acquiring a pro-drop language tend to produce inflected verb forms at an earlier age than in non pro-drop languages. On the other hand, very few studies have focused on the comprehension of tense and aspect. Studies on tense and grammatical aspect in Romance and Germanic languages have shown that although children are able to produce verb forms at an early age, the comprehension on the semantics of verbal morphology is not acquired until much later, when the child is able to attest semantic meaning from the verbal form. By contrast, children acquiring Slavic languages produce and comprehend the semantics of their verbal forms as early as 2;6 years-old, suggesting that children are able to recognize the morphological markings on the verb itself, thus leading them to the early acquisition of their language. Studies on the acquisition of lexical aspect have shown that children up to the age of five have difficulties understanding the telicity of the verb phrase, but we

will see in this study that young children are able to understand telic predicates by attending solely to the syntax of the verb phrase.

1.4 Theoretical framework

The theoretical framework adopted in this thesis is the generative theory of Universal Grammar (UG). The basic assumption of this theory is that humans are biologically endowed with UG, a system of principles, conditions, and rules that are properties of all human languages (Chomsky 1975). The purpose of UG is to guide and constrain the language acquisition process. Within this view, children are guided to determine the parameters of the language they are acquiring, thus children's grammar is in a sense like adult's grammar. In other words, the same grammatical principles that apply in adult grammar operate in child grammar, thus children and adults possess a complete linguistic system from the very beginning. This perspective is also known as the Continuity assumption because it involves a continuous knowledge of the principles of the linguistic system. The strong version of this theory is the Full Complement Hypothesis (Chomsky 1959, 1980, 1999; Hyams 1996; Verrips and Weissenborn 1992; and others).

The study presented in this thesis includes a comparative study on the acquisition of telicity by young learners of Spanish and English. Considering that the encoding of telicity in simple telic predicates patterns the same way in both languages, the theoretical motivation for doing a comparative study was to find out whether UG guides and constrains children's development on the acquisition of telicity in a similar way in the two languages; and whether the adult's grammar and children's grammar in both languages was also the same. The results obtained in the experimental study support the

theory of Universal Grammar by showing that, in both languages, children use syntax as a formal tool to determine the meaning of telic predicates in an adult-like manner. This knowledge is assumed to come from Universal Grammar.

One hypothesis tested in this study is the Aspect before Tense Hypothesis (Bronckart and Sinclair 1973; Antinucci and Miller 1976). The Aspect before Tense hypothesis makes two important claims concerning the development of tense and aspect. The first claim is that in children's early grammar, around the age of 2-3, tense is defective since early tense inflection is used to encode aspectual properties only, such as (a)telicity, durativity, punctuality, etc. and not temporal distinctions. The second claim is that the type of aspectual encoding that children use is lexical aspect and not grammatical aspect. For instance, the early production of *–ing* does not mark progressive aspect which is a form of grammatical aspect but rather it marks the lexical aspectual properties that define the predicate, that is, [+/- dynamic] [+/- durative] [+/- atelic]. In other words, children's early production of verbal morphology is guided by the lexical properties of the predicate. However, this hypothesis is at odds with studies on the acquisition of telicity in English, Finnish, and Dutch that claim that young children are not able to distinguish between simple telic and atelic predicates until around the age of five. At the same time, these studies have also shown that children around the age of three are able to recognize telic predicates as they are marked by particle verbs (e.g., *he ate up the apple*), suggesting that children understand the notion of telicity but perhaps they do not recognize all the properties involved in the marking of simple telic predicates. Then the question that arises is if children recognize the lexical aspectual properties of predicates in general why don't they recognize the lexical aspectual markers of a simple telic

predicate? And, what other markings in a predicate besides particle verbs can lead children to understand telicity? This is the main objective behind this study. That is, in addition to the properties of the internal argument as already established in the literature, what other properties of the verb phrase intervene in the interpretation of telic predicates.

In the remainder of this chapter, I present the background on aspect and the interaction between the aspectual components. In addition, I briefly review the lexical-semantics research that led to the structural representation of verb meaning.

1.5 Background on Aspect

When we communicate about events, we convey information about not only the type of event (e.g., running, walking, dancing) but also how the event unfolds in time. Aspect provides information about the internal temporal structure of the verb and the verb phrase (Verkuyl 1972; Comrie 1976; Chung and Timberlake 1985; Smith 1991, 1997, among others). For example, the sentence *Mary thought about John* expresses an event that unfolds over an unspecified amount of time, whereas the sentence *Mary wrote a letter to John* describes an event that unfolds only until the letter is completed. Writing the letter is an event with a natural endpoint, that is, it is a telic event. In both situations, the type of verb, the arguments of the verb, and the morphology of the verb (e.g., perfective simple past tense) present information to the listener.

In the literature on aspect, a distinction is made between Aktionsart and aspect. Traditionally, the term aspect has been used to refer to information provided by grammatical morphology, such as perfective and imperfective verbal morphology, while Aktionsart has been used to refer to information provided by the inherent lexical

properties of the verb and its arguments[1]. When distinguishing between the two types of aspect, I will use the term lexical aspect and grammatical aspect to refer to Aktionsart and aspect, respectively. Both domains of aspect, lexical and grammatical aspect, interact and determine the information provided in a sentence. Although most analyses on aspect claim that the two types of aspect should be distinguished, it is unclear whether these are two distinct systems or whether they are part of a system that operates at different levels of composition. The nature of the system in which they operate is the lexicon-syntax interface. While grammatical aspect operates at the level of syntax, lexical aspect operates at the level of the lexicon (Tenny and Pustejovsky 2000; Hinrichs 1986; Kamp and Rohrer 1983).

1.5.1 Aspectual Interaction

The study of aspect can be traced back to Aristotle who wrote a typology of events based on verb meanings or internal temporal structure of the verb. The study of aspect was later introduced to linguistic literature by Vendler (1957), from philosophical literature (Ryle 1949; Kenny 1963). Vendler' s four-way typology classified verbs according to temporal duration, temporal termination, and internal temporal structure. Thus, verbs may denote states, activities, accomplishments, or achievements. States have no internal temporal structure or change (e.g., *know the lesson*), activities are events that include an internal temporal structure or change but not a temporal endpoint (e.g., *hike a mountain*), accomplishments are events that include an internal temporal structure and contain a natural endpoint (e.g., *write a letter*), and achievements, which are also events

[1]The terms *Aktionsart* and aspect are also referred in the literature as *Inner aspect* and *Outer aspect* Verkuyl (1987), and *Situation type* and *Viewpoint type* Smith (1991, 1997), respectively.

but have no internal temporal structure, instead, have an instantaneous endpoint or culmination (e.g., *win the lottery*).

However, while Vendler's four-way classification was based exclusively on the inherent semantic properties of the verb alone, it is now generally accepted that lexical aspectual information is composed of the properties of the whole verb phrase. The aspectual information of a sentence is compositional and is composed by the inherent lexical properties of the verb and the verb's arguments. The inherent semantic properties displayed by the verb and its arguments in a sentence are defined as contrasting sets, telic/atelic, stative/dynamic, and instantaneous/durative. However, the properties that distinguish the telic/atelic contrasting set have been regarded as the basic semantic feature determining lexical aspect (Verkuyl 1972, 1993; Dowty 1986; Smith 1991, 1997; Tenny 1994). A predicate is telic when the event that it denotes reaches its natural point of culmination. In other words, when it entails the completion of an event as in (1). For example, the predicate *run two* miles, when the two miles are reached, the running is complete. A predicate is atelic when the event that it denotes does not reach its point of culmination; instead, it denotes an arbitrary ending as in (2). For example, the predicate *drive a car* does not specify a moment in which the event culminates. The use of the adverbials *in X time/ for X time* are standard tests used in the literature to determine if a predicate is telic or atelic.

(1) a. Cross the street (in 30 seconds/*for 30 seconds).
b. Write a poem (in 30 seconds/*for 30 seconds).
c. Run 2 miles (in 10 minutes/*for 10 minutes).

(2) a. Drive a car (*in one minute/for one minute).
b. Watch TV (*in one minute/for one minute).
c. Go skiing (*in five hours/for five hours).

While lexical aspect presents information about the inherent lexical properties of the verb and verb phrase, grammatical aspect, on the other hand, it signals the boundary of an event. Grammatical aspect is usually marked by auxiliaries, and by the inflectional or derivational morphology of the language such as perfective and imperfective morphology. For example, in English, a perfective reading is obtained by the use of the morpheme *–ed* (simple past tense) while an imperfective reading is obtained by combining typically *be* + *-ing* morphology (progressive tense). While perfective aspect focuses on the initial and final boundary of the event, imperfective aspect, on the other hand, focuses on an ongoing action without indicating the initial or final boundary of the event. The use of perfective aspect in a telic verb phrase entails the completion of the event as in (3a), whereas in an atelic verb phrase, perfective aspect entails an arbitrary end as in (3b). By contrast, the use of imperfective aspect in either telic or atelic verb phrase entails an event in progress as the examples in (3c) and (3d) indicate.

(3)	a. Mary wrote a letter.	Telic + Perfective (Completion)
	b. Mary drove a car.	Atelic + Perfective (Non-completion)
	c. Mary was writing a letter.	Telic + Imperfective (Non-completion)
	d. Mary was driving a car.	Atelic + Imperfective (Non-completion)

The aspectual meaning of a sentence is therefore construed on the interaction of the two types of aspect, lexical and grammatical. However, grammatical aspect contributes meaning in such a way that either emphasizes the effects of lexical aspect as in (3a) and (3d) or cancels the effects of lexical aspect as in (3c).

1.6 The Representation of Lexical Aspect

In this section, I will briefly review some of the lexical-semantic accounts that analyzed the representation of verb meaning as a complex structural event. I will not be able to do justice to the large body of literature that has emerged over the past thirty years

in this area. My goal is to present some of the semantics and syntactic research insights that are relevant to my study, which will be later included in my analysis.

Following Vendler's 1967 classification of verbs and the observations on the semantics of lexical aspect, a body of research on how to represent structurally the meaning of verbs began to emerge. The main goal in the representation of the meaning of verbs was to develop a structure that would represent the event designated by the verb. The research that emerged recognized that events are made up of an internal complex structure, which is constituted of an inner and outer event. The outer event is associated with causation and agency and the inner event is associated with telicity and change of state. A clear example of this composition can be seen by predicates of the accomplishment type as, for example, *John ate the apple*. In the predicate *John ate the apple*, the inner event is a telic event in which the apple undergoes a change of state. The outer event is the event of eating, which is agentive and causative. The outer event is agentive because it is performed by the agent John, and causative because the act of eating causes the change of state of the apple. Since the change of state of the apple is the result of causation, the outer event is said to cause the inner event.

The association of the outer event with causation has been analyzed in the literature as one of the basic elements of a complex event structure. Causation as a relation between two events had been traditionally analyzed in the philosophical literature Davidson (1967). However, within the generative semantics framework, one of the first researchers to structurally represent verb meaning and to use the elements of causation and change of state was McCawley (1968). McCawley employed tree structures to capture the semantic and syntactic elements of causation and change of state. For