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ASPECT COMPREHENSION AND PROCESSING IN NARRATIVES BY NATIVE
SPANISH SPEAKERS

By
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A capstone submitted in partial fulfillment of the requirements for the degree of Master
of Arts in English as a Second Language

Hamline University

St. Paul, Minnesota

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I'd like to thank my husband, who unknowingly saved me from giving up on Spanish. Without you, and your family, I likely would have never ended up becoming fluent enough to wonder about aspect in Spanish. Les dedico esto a ustedes con mi corazón.

I'm also indebted to my primary advisory Andreas Schramm. This project was a challenge in many ways. Your patience and mentorship through this process helped me become a better scholar, and, I think, person.

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	1
LIST OF TABLES.....	3
LIST OF FIGURES.....	4
CHAPTER ONE: Introduction.....	5
CHAPTER TWO: Literature Review.....	11
Aspect.....	11
Grammatical Aspect.....	14
Cognitive Processing.....	16
Aspect in Spanish and English.....	17
CHAPTER THREE: Research Methods.....	21
Participants and Settings	21
Design.....	22
Materials.....	22
Procedures.....	24
CHAPTER FOUR: Results.....	26
Moment to Moment Processing.....	27
Off-Line processing.....	31
Comparing Results to Native Arabic Speaker Data.....	32
General Discussion.....	33
CHAPTER FIVE: Conclusion.....	36
REFERENCES.....	43
APPENDICES.....	46
APPENDIX A: Narratives.....	46
APPENDIX B: Translation of Aspect Manipulations.....	54
APPENDIX C: Language Background Questionnaire.....	55

LIST OF TABLES

Table 1: Representation of Vendler's States.....	13
Table 2: Aspect Equivalents in English and Spanish.....	19
Table 3: Moving In.....	23
Table 4: Means and Standard Deviations for Word Completion at Cause and Effect..	30
Table 5: Comprehension Question Responses by Aspect.....	32

LIST OF FIGURES

Figure 1 Relationships between Types of Grammatical Aspect	15
Figure 2 Means for Word Completion Post Cause & Post Effect Location Spanish...	29
Figure 3 Means for Word Completion Post Cause & Post Effect Location for English, Arabic and Spanish Speakers.....	33

I-1SG was-PFV.PST.1SG sick yesterday.
 ‘I was sick yesterday.’

These scenarios have a subtle difference that, despite various professors’ attempts to explain, was not immediately clear to me. In the ungrammatical sentence, marked by the asterisk, the use of the simple past form *estuve* is incorrect; instead, the imperfect form, *estaba* should be used. The use of *estaba* signals to the listener that the person was there and continued to be there when the second person arrived, which as explained in the following chapter is a question of “boundness”. In various classes at the University of Minnesota, this distinction was described as “background information”. In the words of various professors, the rule is that background information takes the imperfect form.

The use of *estuve* is correct in the case of the second example because the idea is bound using the word yesterday. By using the preterite tense, the listener understands that the person was sick yesterday and is no longer sick today. In the first sentence, the use of imperfect aspect is required because I was present, and continued to be present, when she arrived. The use of *estuve* in the first sentence is incorrect because it signals that I have already completed the action of being there when she arrived, which is not accurate. The use of aspect in Spanish, like English, relies heavily on context to decipher meaning. The examples provided above are intended to provide a glimpse into the challenges of aspect for a non-native Spanish speaker.

Aspect was one of the most salient and troublesome parts of my second language acquisition journey. I considered it a “nameless tense problem” until I started working on a research project with Andreas Schramm in 2013. That research project slowly converted into an idea that has now become a capstone project, exploring the concept of a long-time challenge, aspect. In this thesis I will dig deeper into the mechanics of aspect

and explore the details of theories related to both its acquisition and the processes of comprehension.

Upon sharing the idea for my thesis, most people ask me why I chose this topic. To many it seems abstract and obscure, when really aspect is fundamental for speech. In general, linguistics and second language acquisition are fascinating to me and have been for years. Language brings color, instructions and flavor to our interpretation of events and people. Due to its tremendous influence on our lives, I want to know more about it and better understand its mechanics. Also, I appreciate the importance of bilingualism in this constantly integrating world and would like to know how to better facilitate language learning for others. Regarding aspect, I am inclined to study it because of my own challenges during second language learning. I want to shed further understanding this complex linguistic concept. There are other stakeholders who can benefit from this research, other academics, graduate students, English as a Second Language (ESL) teachers, and in turn, ESL students. This chapter continues with an explanation of the importance of aspect in our understanding of narratives.

Generally, the ability to accurately communicate time in speech is a non-negotiable element of successful language acquisition. Consider, for example, the role of time in how people share experiences and activities in their lives. For centuries, human beings have shared culture, history and developed social bonds through narratives, which require that events be shared sequentially and in chronological order. Naturally, people tend to share these experiences in nonlinear fashion, and luckily, languages have built in temporal structures, such as aspect, that allow them to stray from the linear systematic default. Consider how someone may recap the activities at a sporting event. It is unlikely that while telling the story, the speaker will share each detail in chronological order.

More likely the story is begun and details surface as the story is told, hence the need to be able to navigate through the events of the story in a non-chronological fashion. Each language encodes aspect as a way for the speaker to achieve this flexibility.

Each language encodes aspect, and learning how to use aspect is a subtle and necessary requirement for communicative competence of adult ESL learners. Aspect is explained in more detail in chapter 2. I will provide a small introduction here to help provide context for the research questions this chapter will outline. Tense refers to the time in which an event occurred, as it happened to the speaker. Aspect is only concerned with time in regard to the action. In other words, aspect can be thought of as the perspective on an action (Negueruela & Lantolf, 2006). Consider these sentences, *I drank the mocha* and *I was drinking the mocha*. Both are in the past tense: where they differ is in aspect. Aspect tells us about the boundedness of each event. In the first sentence, *drank*, which is an example of perfective aspect (or perfect tense, as stated earlier), denotes a bounded (completed) action. There is no question to the listener whether the speaker drank the mocha. In the second sentence the form *was drinking*, known as the progressive aspect is unbounded (or incomplete). As a listener, we aren't sure if the speaker drank the mocha, was starting to drink the mocha or had sipped a drink or two. By using the progressive aspect, the speaker is emphasizing a specific viewpoint about the action of drinking the mocha. Admittedly, we need more context to completely understand the speaker's intent. It comes as little surprise that aspect is often confused with tense. Hopefully, this is a brief explanation outlines the difference between aspect and tense.

There is ample literature in the field of second language acquisition on how these time structures are expressed; however, the field is lacking information about how aspect

is comprehended (Schramm and Mensink, 2016). The current project will further expand the literature base on aspect comprehension in narratives by native Spanish speakers learning English as a second language. While aspect is a core grammatical concept, the challenge of learning aspect is that few language instructors understand what aspect is, often confusing it with tense, which results in language learners who learn general rules which do not address the intricacies of aspect (Blyth, 1997). More information is needed on this topic because of how aspect affects readers' interpretation of narratives, and how narratives are comprehended. For ESL learners, these are major competency markers that are needed to effectively communicate with native speakers.

As mentioned, there is still much to discover regarding comprehension of aspect in English language learners. This thesis will replicate research completed by Schramm and Mensink, to address this gap in current knowledge. Schramm and Mensink (2016) examined how aspectual markers influence cognitive processing and how non-native English speakers attend to aspectual markers. Through the use of 16 narratives accompanied by carefully placed word completion tasks and comprehension questions, they were able to examine the effects of grammatical aspect on causal inferencing and how the speakers attend to aspectual markers. Their research was completed with native Arabic speaking participants. This thesis will replicate their study, but the primary focus is aspect comprehension in native Spanish speakers. The results from these two linguistic groups will then be compared.

Spanish, like English, marks aspect with morphosyntactic cues. Consider this example, *she is swimming in the pool*. In this sentence the progressive aspect is noted by the –ing morpheme and auxiliary *is*. In the Spanish equivalent, the same type of marking occurs, *ella está nadando en la piscina*, with –ando as the equivalent progressive and *está*

as the form of auxiliary be. Given that Spanish speakers are accustomed to receiving aspectual coding through morphosyntactic means (Salas Gonzalez, 1998), I am expecting the native Spanish speakers to attend to these cues as an English speaker would while they are reading and processing a narrative. Arabic, however, does not code aspect through morphosyntactic cues. The resulting research question then, is: *Is there a difference in the cognitive processing of aspect in narratives by speakers from first languages that mark aspect morphosyntactically as opposed to not marking it?*

Summary

In this chapter both the general importance of the topic of aspect and its importance to the researcher have been outlined. The present study searches to understand more about how aspect is processed and comprehended in native Spanish speakers learning English. This has five chapters in total. Following this summary starts chapter 2, which provides detailed information about lexical and grammatical aspect. Given the research question, chapter 2 also outlines how aspect is encoded in Spanish. Additionally, research related to cognitive processing is explored in detail. Chapter 3 describes the participants, methods used in the study, the design of the study and a brief description of data analysis techniques. In chapter 4 the data will be analyzed and interpreted. Further discussion will then take place in chapter 5, as the implications, limitations and future recommendations for research are explained in detail.

CHAPTER TWO

Literature Review

As mentioned in chapter one, this study sets out to answer the question: *Is there a difference in the cognitive processing of aspect in narratives by speakers from first languages that mark aspect morphosyntactically as opposed to not marking it?* To do this, I compare data from native Arabic speakers, collected by Schramm and Mensink (2016), to data collected from native Spanish speakers in the present study. To establish context and clarify meaning of the terms used, this chapter includes subsections which define aspect, review the concepts of lexical and grammatical aspect, explain cognition as it relates to aspect processing, and provides a short review of the aspect system of Spanish, drawing conclusions about major similarities and differences.

Aspect

Aspect is a challenging concept to understand, and as a result, teach. As mentioned earlier, aspect is often confused with tense; in general, the discussion of time in language classes is limited to tense. Aspect is largely ignored by textbooks, due to its complex nature and dependence on other knowledge of other areas of linguistics, like pragmatics and semantics. As such, aspect doesn't garner as much attention in scientific literature as tense, though it serves a critical function in communication and how speakers express time. The concepts of tense and aspect are explained to provide context for the research question.

Tense expresses the time in which something happened in relation to the time of the speaker. Another way to frame tense is thinking of it as situation-external, meaning that the time of the situation being discussed is contrasted with the time in which the person is discussing it (Comrie, 1976). For example, *my brother ate yesterday*. In this example I am expressing that I am currently in the present and this event happened the day before. Usually people reference tense in terms of the past, present and future. Aspect on the other hand, is considered situation-internal, essentially focusing on the internal time of the event (Comrie, 1976). There are two different types of aspect, grammatical and lexical. These two categories of aspect are also known as viewpoint aspect, and situation aspect, respectively (Comrie, 1976; Klein, 1994; Smith 1997). For the purposes of this research both lexical and grammatical aspect are discussed, however, as lexical aspect is held constant in the experiment, grammatical aspect will be defined and explained in more detail. This chapter proceeds with a short overview of lexical aspect.

Lexical aspect uses the concept of telicity to categorize verbs according to the inherent aspectual boundedness contained in their meaning (Filip, 2012). Telicity refers to the extent the verb's meaning implies the action's completeness. Telic verbs are those which contain a natural endpoint, like *fall*, *kick* and *make*. Atelic verbs have an endpoint that is less clear; verbs like *play*, *study* and *think* are examples of atelic verbs.

Vendler (1957) proposed a system for classification of verbs using lexical aspect and the idea of telicity. The four categories are states, activities, accomplishments and achievements. Verbs categorized states as persisting over time and do not have an inherent end point (Bardovi-Harlig & Reynolds, 1995). Words such as *love*, *to be* and *know* are classified as state verbs. Activities are verbs whose duration exists for a period of time, but that time is not indicated by the verb itself. *I played for an hour* and *She*

walked a mile are examples of activities. Achievements include verbs that convey the beginning or the end of an action. *I started writing this capstone* and *I fell asleep* are examples of achievements. Accomplishments are similar to activities in that they have an inherent duration. They are also similar to achievements in that they have a natural endpoint. Take for example the accomplishment, *build a house*. It is understood that the end is when the house is finished and the duration is inherent. Table 1 below summarizes these concepts, as presented in Ping and Shirai (2000).

Table 1
Representation of Vendler's States

<u>States</u>	<u>Activities</u>	<u>Accomplishments</u>	<u>Achievement</u>
Love, know fall	Play, walk	Build (a house)	Start, fell
	~ ~ ~ ~ ~ ~ ~ ~	~ ~ ~ ~ ~ ~ ~ ~ x	x

Another important consideration in lexical aspect is Klein's classification. Klein's categorization of situation/lexical aspect included 0-, 1- and 2- state situations. 0- state situations correspond to "co-extensive states or processes", 1-state situations correspond to events, processes or activities and 2-state to telic accomplishments and achievements. In this paradigm, Klein uses primarily temporal criteria in comparison to Vendler's states, which use both non-temporal and temporal criteria (Schramm and Mensink, 2016). For this reason, Schramm (1998) employed Klein's categorization of situation aspect in the development of the narratives used in their research, the same narratives used in the present study. Lexical aspect is controlled in the stories, all the verbs in the narratives are classified in the 2-state situation category.

2-state situations have two lexicalized time periods and are telic (Klein, 1994; Vendler, 1957). Consider this example: *pass the truck*. The two time periods include the

time before the truck was passed and the time after the truck was passed. This ability to hone in on the two time periods allows the reader to make inferences about cause and effect. In this study, 2-state situations are used in the narratives instead of 1-state situations because the time periods become more pronounced in the progressive and simple past. Using the same example, *Shelley was passing the truck when her favorite song came on*. Now apply the test question, *did Shelley pass the truck yet?* The answer has to be no, because the second time period isn't expressed in the progressive. In a 1-state situation in the progressive aspect the same result isn't true. *If Bob was dancing with Nancy and was interrupted while dancing with Nancy, has he danced with Nancy yet?* The answer to this question is yes, Bob has danced with Nancy (Schramm & Mensink, 2016; Mozuraitis et al., 2013; Magliano & Schleich, 2000). The reader can draw the conclusion of causation in part because of the 2-state situation. In fact, conclusions regarding cause and effect are stronger when compounded with grammatical aspect, in the progressive and simple past forms. The narratives are designed to hold lexical aspect constant while manipulating grammatical aspect. This manipulation gives insight into how readers are comprehending the narrative, which helps to answer the research question; is there a difference in the cognitive processing of aspect in narratives by speakers from first languages that mark aspect morphosyntactically as opposed to not marking it? This chapter continues with an explanation of grammatical aspect.

Grammatical Aspect

Throughout the literature there are various terms used to describe grammatical aspect, including perfective, imperfective, progressive, simple and preterite (Comrie, 1976; Li & Shirai, 2000). Aspect is encoded in diverse morphosyntactic forms across different languages, which is why researchers find themselves with a healthy aspect

lexicon with which to work. For the purposes of this capstone, the subcategories of grammatical aspect are referred to as the simple past and progressive regardless of the language (English, Spanish or Arabic) being discussed. Figure 1, from Ping and Shirai (2000), illustrates the relationships between the various types of grammatical aspect.

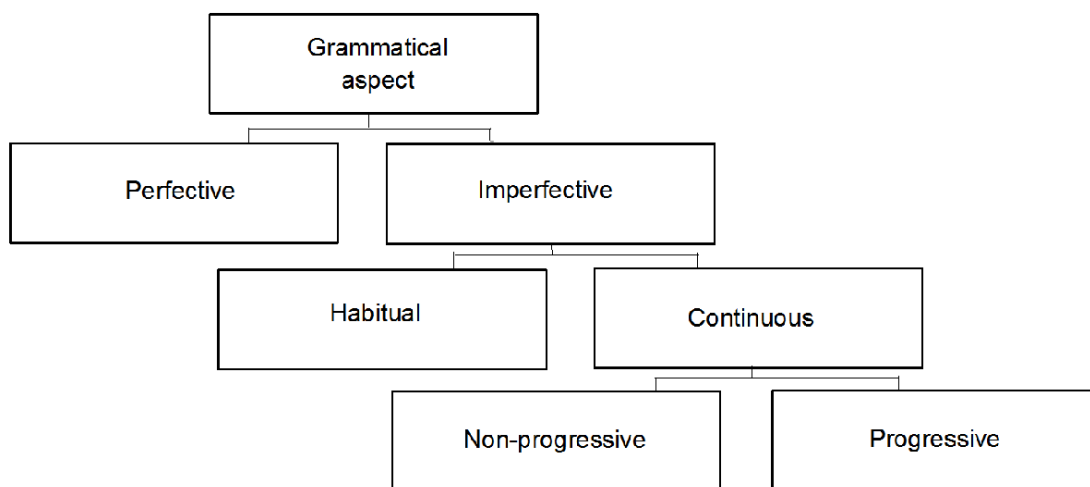


Figure 1: Relationships between Types of Grammatical Aspect

Perfective aspect looks at the event as an unanalyzed whole and imperfective gives an internal view of the event (Comrie, 1976). For example, *she finished the pie* shows perfective aspect, the entire event is presented and complete. In contrast, an example of the imperfective aspect, *she was finishing the pie when her mother arrived*, denotes that the act of finishing the pie was in process when something else happened. Imperfective aspect can be divided into habitual events and continuous (Comrie, 1976). In some romance languages like Spanish, there is marker that differentiates past states (a form of *ser: to be*) and a past action in progress (a form of *estar: to be*). It's important to note that English does not represent this distinction in the same way. Within the umbrella of continuous aspect there are subdivisions, the non-progressive and the progressive. Progressive aspect is dynamic and constantly changing, and is one of the aspectual

markers used in the present study. The progressive aspect is identified by the form *be + vb-ing* as in, *Shelly was passing the truck* (Schramm & Mensink, 2016). As mentioned earlier, the perfective aspect is also used in this study, and is referred to as the simple past instead of perfective. The form of the perfective aspect is *vb-ed* or *have-vb-ed*, for example, *Shelly passed the truck* or *Shelley has passed the truck*.

Cognitive processing

Aspect affects how the reader creates a mental representation of what they are reading. Research on the cognitive processing of aspect has been growing and much of the work done points to the idea that aspect affects what schema the reader is accessing while creating their mental representation (Schramm & Mensink, 2016). According to the work of Zwaan, et al., (1995) the reader crafts their mental representation using five dimensions: causation, space, time, characters and intention. In the construction of time, aspect plays a major role. With respect to the time in which this mental representation is created, Mozuraitis et al., (2013) and Schramm & Mensink (2016) have found that aspect is processed moment to moment; this in turn affects how subsequent events are woven into the existing representation. An important consideration in narrative comprehension was demonstrated by Magliano and Schleich (2000): the progressive events are stored as on-going in the mental representation and the perfective actions are stored as completed.

The nature of how imperfective and perfective events are interpreted, on-going and completed respectively, is a key part of testing how aspect is processed in long term memory (LTM) versus working memory (WM). In LTM, events are sequenced differently depending on the aspect used. In the case of the progressive aspect, the following event will be remembered as if it was occurring simultaneously, like in the example *Shelley was passing the truck when her favorite song came on*. These two events

are understood to be occurring simultaneously (Becker, et al., 2013). In the case of the perfective aspect, the events would be understood to have occurred in a linear fashion, in other words, sequentially. Consider this example, *Shelley passed the truck. Suddenly, she swerved to the right.* As noted by Schramm and Mensink (2016), in this example these events are considered to have happened sequentially. First Shelley passed the truck, then she swerved- she did not swerve while passing the truck. The processing of aspect in LTM is relevant when one looks at how the reader is drawing inferences.

In WM, aspect affects what information is activated and how it stays in focus (Becker, et al., 2013). In both the case of the imperfective and the perfective aspect WM is activated, but imperfective aspect is accessible for a longer period (up to four to seven sentences) and in focus afterwards (Schramm & Mensink, 2016). In the case of situations expressed in the perfect aspect, they are completed, and not online for as long of a period (Schramm, 2001, 1998) and not in focus. Given what is known about the 2-state situation, one of Klein's situation types as explained earlier, this information can be applied to this situation type. Because the 2-state situation expresses the two periods of time on either side of the end point of the first state, the effects of grammatical aspect can be observed more easily as discussed earlier. Through the combination of manipulating grammatical aspect and controlling the 2-state situation, observations about casual inferencing made by the readers can be made.

Aspect in Spanish and English

Aspect in Spanish is also discussed in terms of lexical and grammatical aspect. Like grammatical aspect used in English, there is a perfective and imperfective, the preterito and imperfecto respectively. Given the scope of this thesis, this section of the literature review focuses on grammatical aspect markings in Spanish. Like English,

Spanish uses the preterite markings to express perfective aspect in the past tense. Unlike Spanish, English uses similar markings to convey the imperfect aspect as well, particularly habitual and continuous events (Cuza, 2010). For example, in English we say, *Mary played the piano as a child*, using the same -ed morphology used in the perfective aspect. In Spanish, this morphology would produce a grammatically incorrect sentence, *Mary tocó el piano cuando era niña*. It's important to note that this sentence is only incorrect if the person uttering it aims to communicate that Mary's piano playing was habitual, or on-going. This information about the coding of habitual events is relevant to how a speaker processes the language and events in the narratives. Another component of aspect that also differs slightly from aspect in English is the use of adverbials in Spanish (Salas Gonzalez, 1998). The use of adverbial phrases in Spanish (at 2 o'clock, last week, yesterday, today) is more common and often helpful in interpreting aspect.

Setting aside the inconsistency in expressing habitual events, speakers in both language follow a similar formula with respect to grammatical aspect (Bonilla, 2013; Canales Viquez, 2011). See Table 2 for the English and Spanish equivalents. This is particularly true when navigating events that simultaneously occurred in the past. Consider the translation from the example from the narrative *Moving In* used in this study. The aspect manipulation occurs in this line: *She finally was sending/sent the message*. In Spanish we see a similar structure and use of morphology, *Por fin ella estaba mandando/mandó el mensaje*. The similarity is in the morphology, both Spanish and English use the *be + vb-ing* construction to signal imperfective aspect and the equivalent preterite marking of *-ed*. These similarities can be seen across all 16 narratives used in this study, see Appendix B for translations of the aspect manipulation sentence, which is

why I suspect the potential for the participants to process aspect on par with native English speakers.

Table 2

Aspect Equivalents in English and Spanish

<u>Aspect</u>	<u>English</u>	<u>Spanish</u>
Imperfective	be+ vb-ing	estar+ vb –ando or –iendo (be)
Perfective	vb-ed or have + vb-ed	Past tense form (equivalent of vb-ed) or Haber + vb- participle ending (there)

Because of the similarities between Spanish and English expressions of grammatical aspect, I expect to find that Spanish speakers process aspect like native English speakers. In other words, I suspect that there will be a certain amount of transference from Spanish, their L1. In the case that the speaker has not reached the appropriate level of fluency, I hypothesized that the Spanish speakers will default to interpreting the aspect in the simple past. Salaberry (2011) demonstrates that English speakers learning Spanish use the preterit tense as the default tense marker early in the acquisition process. Given the similarities between the two languages, and the fact that many students learn the past tense shortly after starting formal instruction, I expect they will follow a similar pattern.

There is a lack of literature exploring the connections between how native Spanish-speakers acquire aspect in English. Understanding the relationship between aspect comprehension and grammatical aspect in the two languages serves to guide teaching techniques and further research in aspect acquisition.

Summary

This chapter defined aspect, and explained the two major types relevant to the research at hand, lexical and grammatical. In addition, this chapter included information about the literature on cognitive processing on aspect, which has influence the research design and tools. Lastly, this chapter provided an overview of aspect in Spanish, outlining similarities and differences between the aspectual markers each language employs. The following chapter explains the research design and rationale, as well as other key information regarding the methods used in this thesis.

CHAPTER THREE

Methods

This chapter will outline the research plan, rationale, participants, setting, design and procedure used to answer the research question, *is there a difference in the cognitive processing of aspect in narratives by speakers from first languages that mark aspect morphosyntactically as opposed to not marking it?* The variables analyzed in this study include, causality, long term memory and working memory, and aspect. Participants read 16 short narratives, filled in a word completion task and answered a question after they were finished reading the story.

Participants and Setting

18 English Language Learners (ELL) participated in the study. They are native Spanish speakers, 2 males and 16 females, between the ages of 22 to 46 studying English at a one of two community based programs in the Midwest. The participants are intermediate to advanced level English speakers, as measured by the placement test used in their program. Participants are primarily from Mexico, while one participant is from El Salvador and another from Spain, all Spanish-speaking countries. The participants have been studying English for anywhere from one month to three years and they have lived in the U.S. for anywhere from 1 month to 21 years. The experiment took place in the room where the students attend class, during one of their usual class times. The room where the test was administered did not vary drastically between the sites. The classroom was set up

with tables and chairs theatre style or there were student desks available. One of the programs operates in an elementary school, the other in a community center atmosphere. Participants were read the directions in English and their questions, if they had any, where asked and answered in Spanish.

Design

The experiment uses a 2 aspect: (progressive and preterite) x 2 (causal operator: cause and effect) mixed design, as adapted from the work of Schramm and Mensink (2016). The two grammatical aspects were the imperfective aspect (progressive) and the perfective aspect (simple past). In each story there was a 2-state situation (holding lexical aspect constant) and the grammatical aspect was altered. The word completion task, which gauges activation in memory, placed at two different points, After-Cause, or After-Effect.

There are four variations of the stories and four stories of each variation included in the test packet, hence the 16 story total. One variation is designed to manipulate aspect in the progressive form with word completion tasks following Cause 1. The second condition is designed to manipulate aspect in the simple past form with word completion tasks following Cause 1. The third condition manipulates aspect in the progressive form with the word completion task following the Effect. The fourth condition manipulates aspect in the simple past form with the word completion after the Effect.

The example text, *Moving In*, illustrates where these manipulations occur. In sentence 5 the aspect is manipulated, she finally was *sending/sent* the message, either sending or sent is used. Then, a word completion task is placed either after sentence 5 or sentence 9.

Materials

The study used 16 narratives to test the effect of grammatical aspect on LTM/WM memory, and therefore, comprehension (Schramm and Mensink, 2016; Kivimagi, 2013; Meidal, 2008; Schramm, 1998). In each of the stories aspect was manipulated in Cause 1 as either the progressive or the simple past. Each narrative followed the same structure, two cause situations (cause 1 and cause 2) and a surprise-effect situation. Table 3 outlines the narrative, *Moving In*.

Table 3

Moving In

(1) Carl and Miriam had been dating for several years.	
(2) He recently had asked her to move in with him, and she had promised to let him know by today.	
(3) It was almost noon, and he had been checking his e-mail account all morning to see if she had said yes.	
(4) But Miriam had been very busy in the morning and did not have time to write him her positive answer.	
(5) She finally was sending/sent the message.	Cause 1 (word completion after #5) “M E _ _ _ _ _”
(6) Then, their financial agent called to tell her that he had just spoken with Carl and he said that their investments in the stock market weren't doing so well	Cause 2
(7) During the call, Miriam's eyes wandered across the room.	Filler
(8) She saw the dishes on the table, and her eyes rested on a picture of her favorite Dali painting she put up many years ago.	Filler
(9) Meanwhile, Carl was feeling extremely depressed.	Surprise-effect (word completion after #9)
(10) Why was Carl feeling so depressed?	Final Question

Cause 1 is where the manipulation of grammatical aspect occurs. When Cause 1 is in the simple past form, it is more likely that Cause 2 will be identified as the cause for

the Effect than when it is in the progressive. The filler sentences, anywhere from 5 to 7 of them, ensure that Cause 1 is no longer in WM. To measure the moment to moment processing word completion tasks are inserted at different points of the story, the two conditions in this experiment are after the Cause 1 and after the Effect. Consider the example story above, a word completion task was inserted after sentence 5, in the after cause condition, and after sentence 9, in the after effect condition. At the end of the story there is a comprehension question used to measure off-line processing. The question that the reader answers, in the case of the *Moving In*, the question is *why was Carl feeling depressed?* This question provides information about the inference the reader made regarding cause.

Procedure

Participants read and signed the consent form and then filled out a demographic questionnaire, see Language Background Questionnaire in Appendix C, upon arriving to participate in the study. The participants could choose to receive the consent form written in English or Spanish. The texts participants used were packets of standard office paper printed on with standard black ink. After completion of the consent form the participants fill out the language background questionnaire the instructions for the experiment were explained to participants. They were instructed to read through the narratives at a normal pace, with normal pace defined as how one would read a novel. Participants were also instructed to complete the word completion tasks quickly when they arrived at them, taking not more than 15 seconds to write their answer. Importantly, they were instructed not to return to any previous page of the packet after having turned the page to the word completion task. When they finished the packet, they were instructed to turn it in to me.

They were then given an educational debriefing sheet, explaining more about the study and the experiment.

All the packets were the same and each packet included stories that tested the progressive aspect or simple past aspect and had word completion tasks after the cause or the effect. The word completion tasks stand alone on their own page of the packet, as such, participants read 5-7 sentences of the story, turned the page, filled out the word completion task and then turned the page to continue. Word completion tasks for all conditions appeared on their own sheet of paper. At the very end of the story participants flipped the page where there were asterisks marking the end of the story. Then, on the following page, participants answered the question. Participants were told to take 30-45 seconds to write down the answer to the question to the best of their ability and then move on. In the case that participants did not know the answer they were instructed to put a dash and continue to the next story.

Once the data is collected from the participants it was coded and entered into a spreadsheet. The means and standard deviations were calculated for the different scenarios, both after the cause and after the affect.

Summary

In this chapter the research plan, rationale, participants, setting, design, materials, and procedure used in this research are explained in detail. The narratives used in this study are the same as those used in the work by Schramm and Mensink, 2016; Kivimägi, 2013; Meidal 2008. They are designed to work with the word completion and question task to measure, LTM/WM activation and causal inferencing, which allow the researchers a glimpse into the cognitive processing of aspect. In the next chapter the analysis of the data and an interpretation of the data is discussed.

CHAPTER FOUR

Results

In this chapter an analysis of the data collected is reviewed and the implications for the results are briefly discussed. This experiment was designed to collect information about how Spanish speakers comprehend aspect by manipulating grammatical aspect in 16 narratives in order to answer the research question: *Is there a difference in the cognitive processing of aspect in narratives by speakers from first languages that mark aspect morphosyntactically as opposed to not marking it?* The materials tested moment-to-moment processing using a word completion task, at different points in the narrative. The word completion task was strategically placed, either after the cause or after the effect. After the cause it explored general comprehension of the narrative and whether participants noticed the unusual use of progressive aspect. After the effect, word completions investigated whether participants made causal inferences based on aspect. Causal inferencing and comprehension was explored off-line with a comprehension question. The comprehension question was always placed at the end of the story, after reading the narrative and word completion tasks were finished.

The literature supports that grammatical aspect influences how readers create causal connection between events, specifically events in the simple past that are stored in the mental representation (Schramm and Mensink, 2016). Events in the progressive seem to be more readily available to the reader; it seems as though the unbounded nature of this

aspect form maintains the event available as incomplete even after a 5-7 sentence break (Schramm, 1998). Readers use aspect to generate the mental representation of the text they are reading. By using the word completion task and the comprehension questions we are better able to understand how aspect affects the construction of the mental representation.

Given that Spanish and English both use morphosyntactic means to code aspect, I expect Spanish speakers to process aspectual coding more like native English speakers than the Arabic speakers. By comparing the results of this experiment to the results of a similar study completed with Arabic speakers produced by Schramm and Mensink (2016), I will be able to evaluate this hypothesis. The results of the study are explained in detail below. There is a gap in the literature regarding how native Spanish speakers learning English acquire aspect. However, the literature supports that English speakers learning Spanish as an L2 have a challenge acquiring the preterite and imperfect tense distinctions corresponding to the simple past and progressive aspect in this study (Cuza, 2010). Nevertheless, I expect that while challenging, Spanish speakers may have the upper hand when it comes to processing aspect in English compared to Arabic speakers, considering that aspect use in Spanish is slightly more nuanced than that of English. It's also of note that where Spanish and English share morphosyntactic markers, Arabic and English do not.

Moment to Moment Processing in Spanish Speakers

The word completion task, during which readers complete partial words (also known as word stems) on a separate page, provides access to the level of activation of information in memory during processing. The number of stems completed with words from texts in the two versions (simple past and past progressive) is the measure of the

word completion task. The partial word was part of the verb phrase, either a direct or prepositional object used in the sentence that expressed the causal situation. In the sample text in Table 3 the partial word was "M E _ _ _ _ _" for "message".

Table 3

Moving In

(1) Carl and Miriam had been dating for several years.	
(2) He recently had asked her to move in with him, and she had promised to let him know by today.	
(3) It was almost noon, and he had been checking his e-mail account all morning to see if she had said yes.	
(4) But Miriam had been very busy in the morning and did not have time to write him her positive answer.	
(5) She finally was sending/sent the message.	Cause 1 (word completion after #5) "M E _ _ _ _ _"
(6) Then, their financial agent called to tell her that he had just spoken with Carl and he said that their investments in the stock market weren't doing so well	Cause 2
(7) During the call, Miriam's eyes wandered across the room.	Filler
(8) She saw the dishes on the table, and her eyes rested on a picture of her favorite Dali painting she put up many years ago.	Filler
(9) Meanwhile, Carl was feeling extremely depressed.	Surprise-effect (word completion after #9)
(10) Why was Carl feeling so depressed?	Final Question

Each partial word from the story was also complemented with another partial-word distracter to avoid having participants develop response strategies. Participants were asked to complete the words as quickly and completely as possible. Partial words were presented at exactly one of two potential locations in each text: immediately before or immediately after the two causal operators: Cause 1 and Effect. Thus, there was only

one relevant partial word per story. Presenting partial words directly after the two causal operators also provides a measure to gauge whether participants are comprehending the texts regardless of aspect.

For the moment-to-moment part of the experiment, the independent variables (linguistic aspect, i.e., perfective or imperfective situation, and location of word completion, i.e., right after Cause 1 or Effect) were randomized. Each text contained only one instance of each variable and the participants saw half of the texts with a probe at Cause 1, half with it at the Effect. The dependent variable was the number of completed partial words. Word completions were coded according to number of successful word completions. Every time participants completed a partial word from Cause 1 correctly, a score of 1 was assigned, indicating that the situation meaning from Cause 1 was activated in memory. If a partial word was not completed correctly or at all, 0 was assigned. The averages were calculated at both locations and are reported in Figure 2 below.

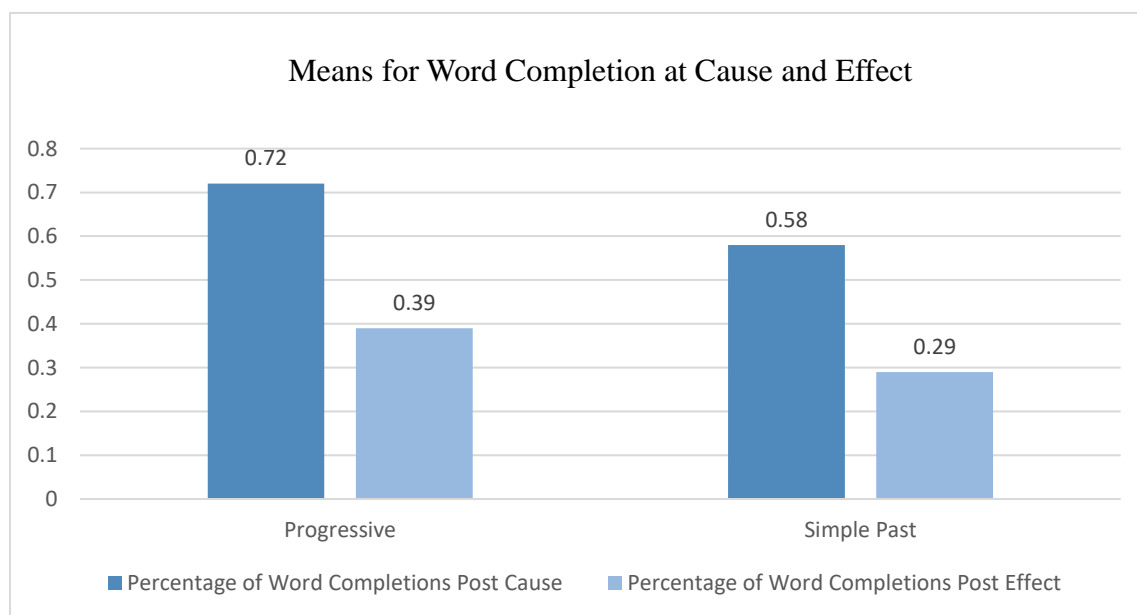


Figure 2. Means for Word Completion Post Cause & Post Effect Location Spanish Speakers

Table 4

Means and Standard Deviations for Word Completion at Cause and Effect

	<u>Progressive Post Cause</u>	<u>Progressive Post Effect</u>	<u>Simple Past Post Cause</u>	<u>Simple Past Post Effect</u>
Mean	.72	.39	.58	.29
SD	.23	.23	.32	.25

A 2 (aspect) x 2 (cause/effect) mixed ANOVA was conducted on the completion frequencies. There was a significant main effect for cause/effect, $F(1, 16) = 26.30$, $MSE = 1.76$, $p < .001$. Words had a higher probability of being completed after the cause than after the effect. The difference in word completions after progressive (imperfective) and simple past (perfective) aspect was marginally significant, $F(1, 16) = 3.75$, $MSE = .25$, $p = .06$. Words after progressive situations were more likely to be completed than after perfective ones. There was no interaction between aspect and cause/effect. Post-hoc tests were conducted to assess the nature of the difference in word completions after the two aspects. Based on this analysis there was a greater probability that the speakers would complete the word completion task when the aspect was in the progressive in both locations, post cause and post effect, $t(17) = 1.74$, $p = .04$ and $t(17) = 1.74$, $p = .03$ respectively.

These findings suggest that the speakers were more likely, regardless of aspect, to complete the task successfully when the task was placed after the cause, which is to be expected and a good sign that the readers are comprehending the text. Additionally, this information signals that aspect is impacting participants' comprehension of the narrative.

This result has been replicated in other research as well (Schramm and Mensink, 2016; Mozuraitis et al., 2013; Magliano & Schleich, 2000).

One conclusion that can be drawn from this data suggests that independent of where the word completion task is placed, aspect is influencing reader's comprehension. A factor that could be impacting the results is the multiple functions of aspect in these scenarios. The use of the progressive after the cause is unusual. Generally, the progressive aspect is used to communicate background information in a narrative, not the plot (Schramm & Mensink, 2016, Hopper, 1982). Learners are noticing this unusual text function of the progressive. The use of the progressive after the effect however, supports the notion that the situation is processed by the learners as incomplete and as a result is still accessible when the causal inference is being made (Becker, et al., 2013; Ferretti et al., 2009; Schramm & Mensink, 2016).

Off-Line Processing

The dependent variable for testing off-line processing is the probability of answering the comprehension question located at the end of the story; an example of a comprehension question from the sample story outlined in Table 3 is, "Why was Carl feeling so depressed?" Participants' responses were coded using a binary system. Responses were coded with a 0 if they were incomplete, incorrect or non-existent, and with a 1 if the answer was correct. The means and the standard deviation are listed in Table 5.

Table 5
*Comprehension Question Responses
 by Aspect*

	<u>Progressive</u>	<u>Simple Past</u>
Mean	.05	.03
SD	.13	.08

A 2 (aspect) x 2 (cause/effect) mixed ANOVA was conducted on the comprehension frequencies. ANOVA was conducted on the completion frequencies. The effect for aspect did not reach significance, $F(1, 16) = .074$, $MSE = .0009$, $p = .42$.

Likewise, post-hoc t-tests confirmed that there was no significance, $t(17) = 1.68$, $p = .21$.

These data show that the mental representation of participants did not contain inferences drawn about the events of the text. While coding the data, I noticed that most of the participants left the answer to the comprehension question blank, resulting in a coding of 0. It is likely that many participants either lacked confidence, or had insufficient writing proficiency, to provide a written response to the question. In chapter 5 this limitation is explained in more detail. Additional vetting of participants' English proficiency should be considered for future research.

Comparing Results to Native Arabic Speaker Data

The word completion data collected in this study was compared with the word completion data collected by Schramm & Mensink (2016). The participants in that study were native Arabic speakers. Aspect is not coded with morphosyntactic markers in Arabic, like Spanish and English. Word completion data in the earlier study was collected using the same narratives and after the cause and after the effect. There were potentially

interesting differences between the data sets. Schramm & Mensink (2016) compared the performance of Arabic speakers with native English speakers. They report that there were significant differences in native English speakers and Arabic learners between the word completion probabilities after imperfective and perfective aspect. In the present study the word completion rate of Spanish speakers was significant. Thus there is a possibility the Spanish speakers benefit from aspect markings in Spanish and therefore are processing aspectual cues in a similar way to English speakers. See Figure 2 for a representation of the means collected from the three languages.

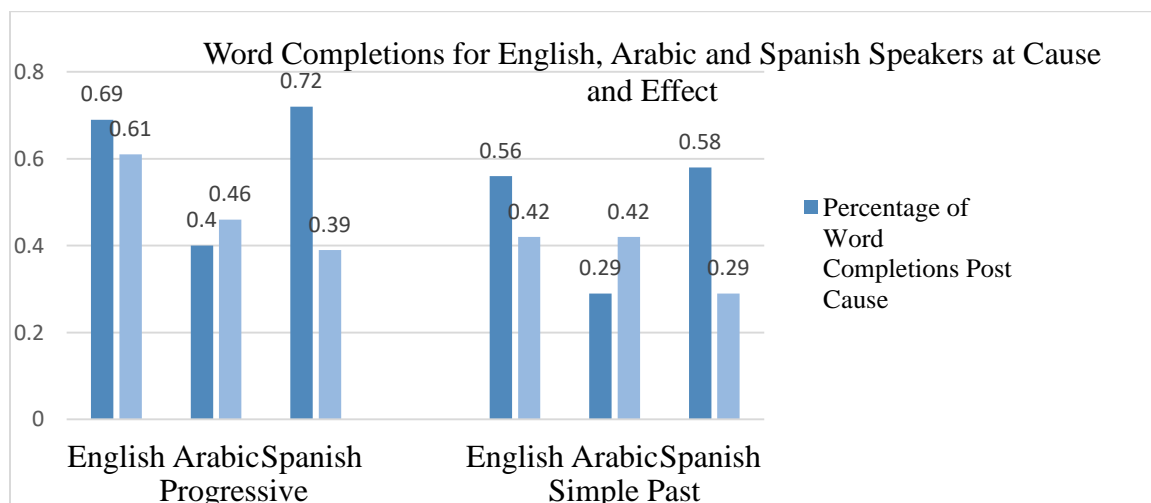


Figure 3. Means for Word Completion Post Cause & Post Effect Location for English, Arabic and Spanish Speakers

Furthermore, the Arabic speakers had a higher level of English proficiency than the Spanish speaking group. There are also differences in the sample sizes which should be considered as well. There number of speakers in the Arabic study was larger than in the Spanish experiment (25 vs. 17). Both differences support the view that aspect markings in the first language support comprehension in the acquired language.

General Discussion

These findings, which show that there was significance in the word completion results for Spanish speakers and not for Arabic speakers, support my original hypothesis. These findings suggest that there are differences in aspectual processing between the two speaker groups based on aspect marking in the first language. Based on these results, there seems to be some type of transference occurring when Spanish speakers are processing aspect in English. Given that these two aspectual systems are similar in their uses and in how grammatical aspect is coded (Bonilla, 2013; Canales Viquez, 2011), this transference could exist. The extent to which the transference is occurring, or whether there is an additional unknown factor, remains to be determined. The extent to which Spanish speakers process aspect cannot be determined in one study. So there is a definite need for continued research to understand how this process unfolds. Additionally, understanding what research has been conducted in languages other than Arabic or Spanish could also prove useful.

Summary

In summary, results were significant for the moment-to-moment processing component of the study. The participants were more likely to fill out the word completion task correctly after the cause instead of the affect. They were slightly more likely to fill out the word completion after the progressive aspect as well. Regarding the comprehension question task, which gauges offline processing, there were no significant results. Reasons for this are explored in the following chapter. When the results from this study were compared to that of Schramm & Mensink (2016) we find that Spanish speakers perform better at the moment-to-moment processing task than the Arabic speakers. Aspect is not encoded with morphosyntactic means in Arabic, while Spanish

does. I believe that transference from the Spanish L1 was an asset to participants in this study.

CHAPTER FIVE

Conclusion

This chapter delivers concluding thoughts about the project, including what was learned, possible implications of the results, limitations of the study and ideas for future research. Additionally, in this chapter I reflect as a researcher and student, sharing my thoughts on my academic growth and the direction of prospective research. The journey to answering the research question, whether or not there is a difference in the cognitive processing of aspect in narratives by native Spanish speakers as compared to native speakers of Arabic was as challenging as it was rewarding.

The combination of personal experience and academic interest, in addition to diving into the literature on this topic, provided a framework for formulating this research question. Understanding the complexities of aspect was intriguing to me as a student, especially after having reflected on learning to use aspect in Spanish. As a native English speaker learning to use aspect in Spanish was a challenge. After realizing the similarities in grammatical aspect between the two languages, I decided to explore the impact that these similarities might have on aspect acquisition for native Spanish speakers learning English. My good fortune in having the opportunity to work with Dr. Schramm provided an experimental model that I could use, in addition to data from a set of Arabic speakers, whose language does not code grammatical aspect using markings similar to English. That lead to the research question, *is there a difference in the cognitive processing of*

aspect in narratives by speakers from first languages that mark aspect morphosyntactically as opposed to not marking it?

Using 16 narratives, I collected data from 18 native Spanish speakers and ESL students. After analyzing the data, we found that there were significant results on the moment-to-moment word completion task from the Spanish speaker data. This demonstrates that there is a difference between how aspect is processed in the post cause condition versus the post effect condition: Spanish speakers were more likely to complete the word completion correctly in the post cause condition than in the post effect condition. They were also more likely to complete the word completion task when aspect was in the progressive form than in the simple past, which is consistent with other research. The results from the off-line processing task in the experiment, measured by the comprehension question, did not yield significant results. Upon reflecting on these results, I believe that the participants lacked the confidence or ability to express themselves through writing.

When the results were compared to data from native Arabic speakers provided by Schramm & Mensink (2016), I found that Spanish speakers were processing aspect more similarly to English speakers than were Arabic speakers. This aligns with my initial hypothesis that Spanish speakers would process aspect more like English speakers.

More research is needed to confirm these findings and explore the relationship between aspect in both English and Spanish. I suspect that there is some level of transfer occurring; the extent to which remains unknown. Additional studies designed to assess cognitive processing of aspect would be ideal. I'm wondering to what extent the transference is encoded in how grammatical aspect is processed unconsciously versus noticed. It's likely a combination of these elements at play, but this study didn't have a

way to assess whether the participants were noticing aspect. One way that we could get more information is ask the comprehension question during an interview and ask the participant why they gave that answer. An interview post-test would also be helpful, we could ask questions about why they answered the comprehension question the way they did.

While reflecting on the project, I realized that there are quite a few limitations of this study. One of them was that I was unable to control for English proficiency of the students who participated in the study. When working to find participants, I tried to find students who were in the intermediate/advanced classes. It appears that this distinction is vastly different from program to program. The materials are designed for students who have intermediate or advanced English proficiency. If I were to replicate this study in the future, I would work at making sure that I could obtain baseline English proficiency scores for the participants. The students participated in one of two community-based ESL programs, each with a different set of tests used to measure proficiency. Additionally, the teachers I worked with did not have accurate or recent testing data for the students in their classes. As such, I was unable to establish a baseline for English proficiency.

I suspect an additional limitation to this study was that the task was too advanced for some of the participants. While coding the testing packets I noticed that almost all the conclusion questions were left blank. This makes me wonder if the students were able, or sufficiently confident, to write out their responses to the questions in sentence form. There were some participants that erased what they were writing, or scratched it out. They were able to read and understand the stories, as evidenced by their completion of the word blanks.

In addition to the English proficiency question, I also believe that the physical materials I used for the experiment can be improved. In this study, each participant received a packet of approximately 60 pages (paper size was 8.5 by 11 inches) with the 16 narratives, including the word completion tasks and comprehension questions. Due to the structure of the narratives, and the need to test memory, there was a lot of paper used to create the packets. I believe the size of these packets created anxiety for the participants. When I handed out the packets I could see the changes of expressions on the students' faces. The narrative was often split into two pages, the first paragraph of the story printed on its own full page, then the page with the word completion task, then a page with the last half of the story, then the comprehension question occupied an entire page for itself. In other words, each page only had one paragraph written in Arial size 12 font, a word completion task, or a comprehension question. Depending on where the word completion task was placed, that meant that there were three or four pages for each narrative, which is how the packets arrived to be about 60 pages. In my ideal testing context I would like to collect this information through a computer program, which would prohibit the students from seeing how long the test is, perhaps lowering anxiety as a result.

Another limitation of the study was the number of participants. Ideally, I was going to be able to collect information from 25-30 participants, however, attendance at these community-based ESL programs varies dramatically from day to day. Because I collected data shortly after the programs' fall classes commenced, they had not established the core group of students who regularly attend classes. In future research I'd like to coordinate testing sessions after the teachers have a better idea of attendance. In addition, I would like to schedule more testing sessions.

This research project stretched both the boundaries of my academic learning and professional experience as an academic. During this process I've come to reaffirm my understanding that the more I learn, the more I realize two different ideas. One is that there are increasing levels of complexity of linguistic topics. It's sufficient to say that I could continue to understand and research aspect for the rest of my professional career and always find something new to learn. The second idea that I've had reaffirmed for me throughout this process is that there is plenty for me to learn about ideas and concepts of which I'm not aware. As I dug into this project, particularly the cognitive processing angle, I realized that the questions I would ask were only sufficient until I learned about another variable impacting cognition that I hadn't previously identified. For example, holding lexical aspect constant affects how grammatical aspect is interpreted. I'm still not entirely clear on how the variables interact with each other, and I feel a sense of wonder which motivates me to continue pursuing research in some capacity as I move throughout my career.

Simultaneously, while analyzing the data, an opportunity came up to present this research as a poster at the Society for Text and Discourse conference. I took advantage of this opportunity, excited that the poster was accepted. It is one endeavor to prepare and conduct for the study, another to write it up and yet another to have to orally express the ideas and conclusions. Presenting the poster was a productive exercise; I felt as though I increased my competency in being able to effectively communicate about aspect, and the research in general. It was also useful in that fellow academics asked great questions, creating more ideas for future projects.

Future research interests include diving deeper into the topic of how native Spanish speakers learning English acquire aspect, I feel like this project gave me a

beginning understanding, but there is much to learn. I also wonder what would happen if half of the stories were presented in Spanish and the other half in English (or vice versa). I'd like to get an idea for how native Spanish speakers are processing aspect in narratives in Spanish, to see if there is a noticeable difference. While reviewing the literature for this project I came across work by Montrul (2009) that examined the impact of bilingualism on aspect acquisition for heritage speakers of Spanish; heritage speakers are those who speak Spanish at home and were simultaneously learning English in an English dominant society. The findings suggested that heritage speakers' aspect models were incomplete; they did not attend to the aspect system like native Spanish speakers. This is interesting to me on many levels. I'd like to study and learn more about how aspect is acquired by heritage speakers, native English speakers learning Spanish and native Spanish speakers learning English. To summarize, I would like to understand how aspect processing in these groups is similar and not.

I would also like to delve deeper into cognition and how language is actively processed in the moment, while reading narratives. In reflecting where I most struggled in this work, I realize that I'm not fluent in the school of thinking or the literature as it relates to cognition of language. Even more interesting to me is how children understand language. I wonder at what point children attend to aspectual cues in spoken language. There is no shortage of questions to consider; perhaps at a future point in my life I can continue advanced studies in Linguistics.

Summary

In summary, the results from this study were intriguing. Despite the limitations presented above, it seems that Spanish speakers are comprehending aspect more similarly to native English speakers than Arabic speakers. There are many avenues through which I

can continue to explore aspect comprehension in various populations. I believe that while this study was a great start, it only scratched the surface of answering the research question, *is there a difference in the cognitive processing of aspect in narratives by speakers from first languages that mark aspect morphosyntactically as opposed to not marking it?* The journey ahead seems promising!

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APPENDIX A

Narratives

Running Late

It was late when Pat got up. She did not have time for breakfast so she grabbed a shiny piece of fruit from the fruit bowl. Pat rushed out the door. On her way downstairs, she was eating/ate the apple. Near the exit, the janitor was mopping the floor. This reminded her that it was the day of the office cleanup. She would have to go through her papers and get things off the floor. Pat liked organizing her work place since the next day all of her documents were back where they belonged. Next thing she knew, Pat was cringing in pain.

A P _ _ _ _

R _ _ _ _

Why was Pat cringing in pain?

Driving Around

Jean-Louis was driving along the Cote d'Azur in his native San Tropez, when he noticed a leak in the cooling system of his vehicle. He was barely able to drive back to his house. He drove into the garage and immediately went to work. He was replacing/replaced the hose to the radiator. While Jean-Louis was getting a snack, his girlfriend Joelle jumped in the car wondering if he had finally put in a new battery. But she couldn't find the key. She searched all of her purse. She checked her pockets—still without luck. Then she remembered the key that was hidden in the garage. She got the key and climbed back into the car. When she turned the key, the car would not start.

H _ _ _ _

S H _ _ _ _ _

Why didn't the car start?

Work Day

Rebecca and Tanya decided to get some work done around their apartment. In the morning they painted Tanya's room. In the afternoon they waxed the floors. Now it was evening. Rebecca was tired, sat down, and started reading through her old magazines. Tanya still wanted to put up her favorite picture. She marked the wall and was hammering/hammered in the nail. Rebecca, while getting one of her magazines, bumped into a big stack of books, which came crashing down. Tanya sighed in relief. It was a good thing that she had moved her collection of old special dolls. She was an art collector and really liked those dolls. Some of them came from faraway places and were dressed in ethnic clothes. A neighbor called to complain about the noise.

N _ _ _

O T _ _ _

Why was there so much noise that a neighbor called?

Back from Vacation

Sam had just come back from vacation, and things had really become backed up during his absence. So he worked on the computer program and had to decide whether there was enough time to run it right away. After all, trying out new code often crashed the system, and it took forever to start up the computer again. Sam made his decision and was testing/tested the program. Exhausted, he played a self-designed computer game hoping that nobody had messed with it during his absence. He really needed a short break from his work, and he enjoyed playing on the computer tremendously. He sat back to get comfortable in his chair. He sipped coffee from his favorite cup. Then the screen froze.

P R _ _ _ _ _

Y O _ _ _

What caused the screen to freeze?

Assembling a Swing

Janet was putting together a swing in the front yard. To see the final size of the structure, she took all the pieces and loosely put them together. Janet asked Mike, her 12-year-old, to start with the yard work while she was working on the swing. Mike wasn't too excited because he wanted to play baseball with his friends. He was cutting/cut the grass. When Janet returned from the hardware store where she had picked up a missing tool, she saw a dog frantically charging across all the neighbors' properties. Janet slowed down and turned on her left blinker. Traffic was heavier than usual. She had to wait awhile to make her turn. When Janet glanced over to the swing it had been knocked down.

L _ _ _ _

A N _ _ _ _

Why did the swing get knocked down?

Emergency Operation

It was an emergency operation. Dr. Greene and Dr. Ross needed to prepare the patient as quickly as possible. Therefore Dr. Greene was applying/applied a new and somewhat risky procedure. Dr. Ross, well aware of a recent patient's death under similar circumstances, carefully gave an injection for the operation. The nurse came into the operating room. She needed to get ready for the operation. She cleaned the instruments and placed them within the doctors' reach. All of a sudden, the patient got much worse.

P R _ _ _ _ _ _

D R _ _ _ _

Why did the patient get worse?

Repair Jobs

Mother had noticed that a step on the stairs leading down to the basement needed to be repaired. She told Dad. So, on Saturday before doing several other repair jobs, Dad worked on the stairs. He was replacing/replaced the board. The children had their blocks scattered all over the top of the stairs when the phone rang. Mom answered it, but it was for Dad. Mom and Dad have a small business, for which they needed to be available on Saturdays, too. Several years ago, they started selling homemade blankets that Mom and her friends make. Dad was doing the advertising and accounting. Racing up the stairs, Dad stumbled and started falling.

B O _ _ _

P A _ _ _ _

Why did Dad stumble?

Day at the Office

In the morning, Gary's manager told him that the business proposal should be finished that evening and put on his desk. This project was Gary's top priority and would take up a good portion of the day. Gary found all the necessary information and was writing/wrote the proposal. In the afternoon, Gary started feeling sick, but he stayed at work. Awhile later, one of his co-workers stopped by to ask him a question about semiconductors. Semiconductors was Gary's specialization, and he did not mind answering questions about them. In fact, the company was thinking about giving him a raise because of this superior knowledge in that area. Right before quitting time there was a birthday party, but Gary couldn't go.

R E _ _ _ _

D _ _ _

Why could Gary not go to the party?

Visiting the Grandparents

Shelley was visiting her grandparents in Northern Minnesota. It was a beautiful drive, the narrow two-lane road lined with trees, the leaves beginning to turn. The road was empty except for this slow poke in front of her. Impatiently, she was passing/passed the pickup. Unexpectedly, a deer came charging out of the woods, forcing her to turn the steering wheel to the right. Within split seconds, several thoughts raced through her head. The car belonged to the company her dad works for. Would she get in trouble for taking it without asking? Would he punish her by not letting her use his car again? She felt a strong bump.

PI _ _ _ _

SH _ _ _ _ _ _

Why did Shelley feel a strong bump?

Time for Baths

It was definitely time for baths. The children had played outside in the rain and were all muddy and cold. Mr. Duncan went upstairs to the bathroom. He was filling/filled the tub with warm water. Back downstairs while waiting for his kids, the heavy rainfall reminded him to have the hole in the roof fixed. Meanwhile his daughter was taking her time. First she did not like the carrots, and then she needed more to drink. Mr. Duncan got up and got her some apple juice from the refrigerator. Right then, Mrs. Duncan came running into the kitchen to tell him that there was water dripping from the ceiling.

T _ _

TA _ _ _

Why was there water dripping from the ceiling?

Rob and Alisha's System

Rob and Alisha had a nice system going. Each day they split up what duties they had to do. Today, Alisha took care of the living room, and Rob was cleaning the kitchen. Rob was washing/washed the dishes. Alisha watered the plants and started arranging the flowers in one of their special vases. She felt bad because it had been a terrible day for her. She overslept, missed her bus, and was reprimanded by her boss. In her rush she forgot her purse. And on top of everything her lunch date did not show. Suddenly there was a shattering noise.

D I _ _ _ _

U N _ _ _ _ _

What was the cause of the shattering noise?

Christmas Celebration

Jodie was at the annual Christmas celebration. She had really dressed up for the occasion. She was enjoying herself but needed to slip around the corner because her clothes felt uncomfortable. She was adjusting/adjusted her pantyhose. She also noticed that there was a huge mustard stain right on her special skirt. Jodie was very upset. It was one of her favorite skirts. It was made out of pink satin and looked very good on her. She had gotten it as a present from her sister after finishing college. When her boss came around the corner, Jodie was so embarrassed.

P A _ _ _ _ _ _ _

N O _ _ _

Why was Jodie embarrassed?

Sunday Paper

Walter fetched the Sunday paper from the porch and sat down on the floor to look through it. Before he even touched the rest of the paper, he looked through the coupon section. Walter decided which coupons he could use. He grabbed a scissors from the table and was cutting out / cut out all of the coupons with it. While slowly leaning against the shelves to support his back, Walter lost his balance. Immediately, he started worrying about the coupons. They might get wrinkled and ripped. Then he wouldn't be able to use them, which he couldn't afford. His job as clerk just did not pay enough. He felt a strong pain.

S C _ _ _ _ _

P R _ _ _ _ _

What caused the pain when Walter lost his balance?

Moving In

Carl and Miriam had been dating for several years. He recently had asked her to move in with him, and she had promised to let him know by today. It was almost noon, and he had been checking his e-mail account all morning to see if she had said yes. But Miriam had been very busy in the morning and did not have time to write him her positive answer. She finally was sending/sent the message. Then, their financial agent called to tell her that he had just spoken with Carl and he said that their investments in the stock market weren't doing so well. During the call, Miriam's eyes wandered across the room. She saw the dishes on the table, and her eyes rested on a picture of her favorite Dali painting she put up many years ago. The rest of the room was hard to make out because the curtains were drawn. Meanwhile, Carl was feeling extremely depressed.

M E _ _ _ _ _

F L _ _ _

Why was Carl feeling so depressed?

Heavily in Debt

In the year 1790, Mozart had borrowed too much money and was heavily in debt. Fortunately, one morning a rich customer asked him to write a short piece of music for a large amount of money. But there was one condition: Mozart had to finish it by evening of the same day. The work proved very difficult because of Mozart's bad health. Mozart was composing/composed the sonata. To clear his mind, he went out with several of his friends and treated them to beer and wine. It was cold and snowy on that day in Vienna. Winter had finally begun. The snow was coming down in big, heavy flakes. People were clearing the sidewalks. When he returned home late that night, Mozart's wife started crying because there was not enough money to buy food for the family.

S O _ _ _ _

A _ _ _

Why wasn't there enough money for food?

Home from School Soon

The kids would be home from school soon. Since they were usually very hungry, it was time to prepare dinner. Sandy cleaned all the vegetables she needed for the dish she wanted to prepare. She put all the ingredients into a pot and was cooking/cooked the meal. While getting some parsley from her garden to decorate the dish, Sandy stopped to chat with Phyllis, who was grilling hamburgers. Phyllis always knew the latest neighborhood news. Another neighbor's daughter was seriously ill and had been told not to have children. Since things were not going well in that daughter's marriage, she had gotten pregnant anyway. Now everybody was rather interested in the mother's reaction. After a few minutes, the two friends noticed the smell of something burning.

M _ _ _

B L _ _ _ _ _

Why was there the smell of something burning?

APPENDIX B

Translation of Aspect Manipulations

Story	English	Spanish
Assembling a Swing	was mowing/mowed	estaba cortando/cortó
Back from Vacation	was testing/tested	estaba probando/probó
Visiting the Grandparents	was passing/passed	estaba pasando/pasó
Sunday Paper	was cutting/cut	estaba cortando/cortó
Repair Jobs	was replacing/replaced	estaba reemplazando/ reemplazó
Christmas Celebration	was adjusting/adjusted	estaba ajustando/ajustó
Home from School Soon	was cooking/cooked	estaba cocinando/concinó
Heavily in Debt	was composing/composed	estaba componiendo/compuso
Day at the Office	was writing/wrote	estaba escribiendo/escribió
Driving Around	was replacing/replaced	estaba reemplazando/ reemplazó
Rob and Alisha's System	was washing/washed	estaba lavando/lavó
Running Late	was eating/ate	estaba comiendo/comió
Emergency Operation	was administering/administered	estaba administrando/administró
Work Day	was hammering/hammered	estaba pegando/pegó
Time for Baths	was filling/filled	estaba llenando/llenó
Moving In	was sending/sent	estaba enviando/envió

APPENDIX C

Language Background Questionnaire

Name: _____ Age: _____
Gender: _____

1. *What country are you from?*

2. *What part of your country (large city, small town, country side) are you from?*

3. *How much schooling have you had?*

4. *What is your native language?*

2. *How many years have you studied English in school?*

3. *How long have you lived in the United States or some other English-Speaking country?*

4. *How well can you talk with your English-speaking friends?*

1 2 3 4 5 6 7 8 9 10 11
Not at all excellent
(circle one)

5. *How well can you express what you want to say in your language course?*

1 2 3 4 5 6 7 8 9 10 11

Not at all
(circle one)

excellent

6. *How much do you understand in your language course?*

1 2 3 4 5 6 7 8 9 10 11
Not at all excellent
(circle one)

7. *How much do you understand when you read your language course materials?*

1 2 3 4 5 6 7 8 9 10 11
Not at all excellent
(circle one)

8. *How well can you express what you want to write in your language course?*

1 2 3 4 5 6 7 8 9 10 11
Not at all excellent
(circle one)