Motion Events in Spanish as a Foreign Language

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Talmy (1975; 1985) proposes that most of the world's languages can be divided into two classes regarding their expression of Motion Situations. The difference between these languages lies in the additional elements with which Motion is combined in the verb root. Spanish, for instance, typically describes the Motion and the Path in the verb root, while English conflates Motion and Manner in the verb. Speakers of a language must therefore focus their attention on different aspects of a Motion Situation in order to effectively describe it in their language. Prior research has attempted to discover whether L2 speakers can learn a new way of experiencing Motion Situations in order to describe them later. The consensus is that this is a difficult change to make at most levels, even for near-native speakers. This thesis looks at some fundamental elements of how native speakers of English develop their ability to express motion at two early stages of learning Spanish. The productive ability of beginning and low-intermediate Spanish L2 learners was analyzed against native speakers during the narration of a wordless picture book as well as filling in blanks of a Spanish representation. The results show that beginning students use many light manner verb constructions including phonologically null light verbs. Similarly, low-intermediate students revert to English when the production of a Motion Situation requires the conflation of Motion and Path instead of Manner. These findings suggest that Talmy's typological framework may not explore issues with L2 transfer deeply enough. Instead, a finer-grained analysis can explain some results that are not predicted by Talmy's typology. It is

suggested that this style of analysis continue to be used to better describe the early process of L2 Spanish acquisition.

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1.0 INTRODUCTION

The world's languages generally can be classified as one of two types: S-languages, where Motion and Manner are part of the lexical meaning of the verb root as in English, and V-languages, where verbs describe a relationship between Motion and Path as in Spanish. As discussed below, these are exemplified by the contrast shown by sentences such as *The man danced to the stage* and *El hombre llegó al escenario bailando* 'The man arrived at the stage dancing.' These two types shape the thought processes of native speakers (hereafter NSs) of different languages in unique ways, a process which Slobin (2000) calls "thinking for speaking." Furthermore, each type requires that NSs learn to experience Motion Situations following the particular set of constraints imposed by their native language. Therefore, Slobin (2000) suggests that NSs of English experience a Motion Situation in a way that makes Manner readily available for later recall. However, a native Spanish speaker will experience the same Motion Situation in a way that emphasizes Path. While the typology of languages may resolve many issues regarding the classification of languages into separate categories, it raises many questions about non-native speakers' ability to cross typological boundaries while learning their second language; to paraphrase Slobin (1996), can non-native speakers learn a new way of "thinking for speaking?"

Of particular interest to the study presented here is the extent to which NSs of an S-language such as English acquire this new aspect of the language during the early stages of learning a V-language such as Spanish. This is interesting because in addition to having to cross

a typological boundary, several other factors may inhibit complete acquisition of the Motion Situations reviewed in this thesis. One of these factors is that English is a superset of Spanish in that it also allows the expression of Motion as in Spanish, and another factor is the issue of vocabulary acquisition in general. (1) and (2) are examples of how English can formulate grammatical sentence following both the S- and V-language patterning:

(1) *John ran into the house* (S-language patterning)

and

(2) *John went running into the house* (V-language patterning)

(3) and (4) show how Spanish can only follow the V-language patterning:

(3) *Juan entró corriendo en la casa* (V-language patterning)
"John entered running in the house"

but not

(4) **Juan corrió en la casa*[1] (S-language patterning)
"John ran in the house"

These additional elements must be discussed in an effort to clear away intervening variables.

The research conducted in this thesis, therefore, focuses more closely on two elements closely tied to Motion Situations in second language acquisition: descriptions by English NSs of L2 Spanish of Motion Situations and their strategies of lexical compensation. This study involves primary source data taken from English-speaking students in their second (beginning) and fourth (low-intermediate) semesters of Spanish, as well as a Spanish native control group. The results show that the beginning level participants are likely to possess insufficient vocabulary to

[1] In Spanish, this sentence can only mean "John was running around inside the house." It cannot mean "John ran through a doorway into house from the outside."

describe Motion Situations and default to a description of the scene focusing on general aspects of the situation instead of just Motion. They do so by using locative prepositional phrases (hereafter PPs) and light verbs, that is to say verbs with little lexical content, which take the place of Spanish Motion verbs. Low-intermediate level students have enough receptive vocabulary to describe the Motion Situation, though their use of Spanish Manner verbs is incorrect even if consistent with the patterning of their native S-language, not the V-language they are learning.

Before discussing the data collected, it is necessary to become familiar with the theoretical basis for these language types.

2.0 TYPOLOGY

Talmy (1975) highlights many differences among the world's languages by demonstrating that languages belong to one of two distinct categories according to how they express Motion. By classifying the different forms of expression into those that show "a wide variety of patterns, a comparatively small number of patterns (a typology), or a single pattern (a universal)" (Talmy, 1985, p. 1), he presents an important distinction among languages. When specifically focusing on types, Talmy (1985) characterizes languages into verb-framed languages and satellite-framed languages. Importantly, every language is classified as either one or the other, but never both, though this idea is challenged in section 4.2 below. Before describing each type and highlighting some important differences between the two, it will be useful to understand some basic terminology that applies to both language types.

Cross-linguistically, the universal semantic elements of Motion Situations are Motion, Figure, Ground, and Path[2] (Talmy, 1987). An additional universal component of utmost importance to the present discussion is Manner, which need not be a required element in the Motion Situation of a particular language. However, all languages do have a way to describe Manner, even if they do not appear in all Motion Situations. On the other hand, the semantic element of Motion is obviously required for a Motion Situation. This category is the essential

[2] This paper follows Talmy's convention of capitalizing these words when they describe the semantic element in question. Furthermore, though Talmy continues his list, the elements not listed here are irrelevant to this discussion.

driving force, the action, behind Motion Situations and is generally, if not always, associated with the verb root. Consider the following example from Talmy (1975):

(5)

	The bottle	*floated*	*into*	*the cove*	
S_M =	F	Mo + Mn	P	G	(p. 4)

Here, the Figure (F) is the semantic agent, or theme, and grammatical subject of the Motion Situation (S_M). The Ground (G) references the Figure with respect to the Motion (Mo) creating the Motion Situation, which is to say that it constitutes the setting. The Path (P) describes the course the Figure takes while participating in the Motion Situation in relation to the Ground. Finally, the Manner (Mn) describes the fashion in which the Motion Situation takes place. Though a closer analysis of the English conflation pattern follows, (5) shows that, as a universal tendency among languages, no more than two semantic elements, most commonly Motion, Manner, or Path, may be conflated in the verb root. In this instance, Manner and Motion are the two semantic elements present in the English verb *float*.

English is a satellite-framed language (*S-language* according to Slobin, 1996) and (5) above (6) below is an example sentence of this:

(6)

	The man	*danced*	*to*	*the stage*
S_M =	F	Mo+Mn	P	G

This type of language adds to the meaning inherent in the main verb of the sentence, or verb root, using a satellite either as an affix or a preposition phrase (Talmy, 1985). As with all languages, S-languages lexicalize the Motion component in the verb root, but in contrast to V-languages, where Path and Motion conflate in the verb root, S-languages generally conflate Manner and Motion. (5) and (6) show how in English, Manner and Motion are conflated in the verb root, *dance*, while Path is a separate entity, *to*. Additionally, many S-languages have the ability to

conflate Path and Motion, though for most V-languages Manner and Motion conflation in the verb root is quite rare.

Though they are not exactly the opposite of S-languages, the verb-framed languages (*V-languages* according to Slobin, 1996) are those where the verb root expresses both the Motion component and the Path through which that event takes place, as Spanish does (Talmy, 1985). This is illustrated in (7):

(7)	*El hombre*	*llegó*	*al escenario*	*bailando*
	The man	arrived	at-the stage	dancing
S_M =	F	Mo + P	G	Mn

V-languages rarely encode Manner in the verb if Path is the desired focus of attention; rather, V-languages apply Manner typically to a Motion Situation using a supplementary element. In Spanish, this element is usually a gerund[3] though sometimes it can be a PP. As is evident in (7), Motion and Path combine in the verb root, *llegó*[4]. In other words, V-languages do not typically allow Manner to conflate with the Motion inherent in the verb root, which differs sharply from S-languages.

It is important to note that the word-for-word translation into English of (7), *The man arrived at the stage dancing*, is a grammatically acceptable sentence, though this construction is unidiomatic or infrequent. However, a similar translation of (6) into Spanish, **El hombre bailó al escenario* "The man danced to the stage" constitutes an ungrammatical sentence, even though this is the most natural structure in English. This will be important in the subsequent discussion of first language transfer (hereafter L1 transfer).

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[3] In Spanish, *gerund* is the equivalent of the present participle in English.
[4] While particular morphemes may be relevant to the discussion of some languages' expression of Motion Situations, in Spanish and English, Motion, Manner, and Path are not fundamentally affected by the morphology of verbs. This information will therefore be disregarded throughout this thesis.

Comparing the two examples of natural language up to this point, Spanish and English do indeed belong to different types as Talmy (1985) suggests. The Spanish version, *El hombre llegó al escenario bailando*, is virtually identical in terms of semantic content with its English counterpart, *The man danced to the stage*. However, the two languages express this idea through different constructions; as pointed out above, English, an S-language, conflates Motion and Manner in the verb root with an additional Path element. Spanish, a V-language, conflates Motion and Path in the verb root with an optional Manner element. Therefore, we predict that these typological differences will affect the L2 acquisition of Spanish by English NSs (hereafter NSs). The rest of the thesis discusses these L2 acquisition issues.

3.0 TYPOLOGY FOR "THINKING FOR SPEAKING"

Slobin (1996) begins his discussion by asking how language helps define a speaker's worldview. As a result, he develops his own theory, which he calls "thinking for speaking" (p. 107). According to this paradigm, he shows that language types as defined by Talmy (1985) affect how a speaker verbalizes certain experiences, in particular those that relate to Motion Situations. In Slobin's (1996) own words, "The world does not present 'events' to be encoded in language; rather in the process of speaking or writing, experiences are filtered through language into *verbalized events*" (p. 107, emphasis in original). By this, he means that any experience described by a speaker must first pass through the mind of the experiencer, a mind which has already been influenced by his or her native language.

Slobin (1996) addresses this "which came first" paradox with an interesting experiment. Using a children's book without words, he asks children to tell the story of a boy and his dog who have lost their frog. Slobin (1996) finds that the children's stories were teeming with Motion verbs. With the data that he collects from the children, he discovers, in accord with Talmy's (1985) theory of types, that the English-speaking children do use more Manner of Motion verbs than Spanish speaking children, in fact nearly twice as many. He states that the reason for this difference in the choice of verb type is that the children's language, and in

particular the type of language, implies they have been "trained" in "thinking for speaking."[5] Specifically, Slobin (1996) hypothesizes that their languages are implicitly teaching children to visualize each situation contingent upon how that language functions. Therefore, they will be better able to describe the story to an investigator after familiarizing themselves with the series of situations.

Spanish speakers, in order to be able to produce a spoken Motion Situation, must pay more online attention to how Motion and Path are linked; this is in contrast with English NSs who habitually conflate Motion and Manner in the verbal elements of a sentence. As Enrique Palancar, a Spanish NS, tells Slobin (1996), "I never use manner verbs when I have some kind of path in mind; manner verbs are activity verbs" (p. 131). [6] As is evident, Spanish NSs formulate Motion Situations differently from English speakers.

In addition to the productive ability and how it relates to Motion Situations, Slobin (2005) further substantiates this claim in an empirical study of the receptive ability of Spanish and English NSs. He supplies his participants with an original Spanish language passage, rich in verbs conflating Motion and Path such as *andar 'to* walk' and *caminar 'to* walk.' For English NSs, he chooses a word-for-word translation of the same passage where the verbs in English do not exhibit Path, rather Manner, such as *walk*. His choice of passage highlights the inherent differences in Manner of Motion between the two languages. Slobin (2005) reports that English readers gleaned more Manner of Motion from the passage than Spanish NSs did. He concludes this part of his discussion by stating that "Such findings suggest that the actual conceptualizations of motion events may differ for speakers of typologically different languages" (p. 10).

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[5] See section 9.0 for a discussion of culture versus language.
[6] Although this captures the spirit of the idea, this claim may be too strong as is.

Therefore, Spanish and English speakers differ at the level of mental representation of Motion Situations and how they express them through their native language (Slobin, 1996; 2005). In order for these speakers to be able to describe events in their language, they must pay attention to the elements that can be expressed in it. For example, an English speaker witnessing an owl popping out of a hole will focus on the Manner in which it emerges and will later be able to choose the correct verb when describing the event. In contrast, a Spanish speaker witnessing the same event will need to focus on the Path in order to choose the correct verb; any manner they identify will be supplementary information. Consequently, because "the two language types differ in their *habitual attention* to manner of motion" (Slobin, 1996, p. 113, emphasis in original), the speakers of these typologically dissimilar languages must also focus their attention in a different way.

For this reason, Slobin (1996) suggests that people do think in a way that aids speaking, and evidence from some Spanish/English bilinguals supports his proposal. These participants describe different levels of mental imagery according to the language they are reading (Slobin, 2000). In English, they describe more images of directed movement than in Spanish, though they note even fewer still than do monolingual English speakers (Slobin, 1996). Evidently, bilinguals and NSs fall under different categories, partially because true bilinguals are effectively NSs of two languages. Moreover, second language learners are in a completely distinct category from both bilinguals and NSs. Therefore while each group of speakers is in a unique position within the "thinking for speaking" framework, L2 learners are the only group that is faced with the challenge of having to learn to think in a new way to facilitate speaking. During their L2 learning process and their radical new way of "thinking for speaking," they often, if not always, encounter bumps along their path especially in the beginning.

4.0 L1 TRANSFER

One of the major issues in L2 acquisition is the underlying assumption by the learner that the L2 is identical to their L1 in all but the lexicon. This problem leads learners towards the transfer of many elements of their L1. Cadierno and Lund (2004, p. 144), following Kellerman and Sharwood-Smith (1985), succinctly define L1 transfer as "crosslinguistic influence in SLA." To investigate this problem, they recommend investigations into how English NSs learn Spanish (Cadierno & Lund, 2004). In an effort to jumpstart the process, Cadierno and Lund (2004) present several possible hypotheses that need testing. They even offer several research methodologies, though these descriptions are relatively brief and incomplete. They suggest the continued use of *Frog, Where Are You?*, as Slobin (1996) uses to study L1 acquisition, modifying it to elicit Motion Situations from L2 learners.

Cadierno and Lund (2004) review the various works of Talmy and Slobin and present an argument of how the works of Talmy and Slobin apply to L2 acquisition. They offer a working hypothesis such that "learning an L2 will involve learning another way of 'thinking for speaking,' that is, learning how the semantic components of a motion event are mapped onto L2 surface forms" (p. 145). Though they do not test this hypothesis with primary source data, Cadierno and Lund (2004) do suggest some possible outcomes should it to be tested using NSs of Danish, an S-language like English, learning L2 Spanish, a V-language.

The most pertinent hypothesis to the present study is one that states that Danish NSs should be observed conflating L2 Spanish verbs of Motion with Manner (Cadierno & Lund, 2004). This hypothesis is based on Talmy's (1985) theory that NSs of Spanish do not accept as grammatical the conflation of Manner in the verb root. Therefore, researching this hypothesis should help determine the extent to which L1 transfer occurs and in turn, provide a roadmap for the L2 learner's new way of "thinking for speaking" (Cadierno & Lund, 2004). An investigation should produce results showing a reverse correlation between L1 transfer and L2 event conceptualization. Specifically, their hypothesis states that a higher L1 transfer rate, especially regarding Motion Situations, will lower the rate of remapping the L2 "thinking for speaking" paradigm. This means that there are three possible outcomes for an L2 learner's output: the sentence produced will be ungrammatical; it will be interpretable only in a way that the speaker did not intend; or it will be both ungrammatical and impossible to interpret. Finally, if the study shows that L1 transfer can be avoided, then the L2 way of "thinking for speaking" should be able to be learned.

Cadierno and Lund (2004) conclude their paper with four sample recommendations specifying how to investigate L1 transfer. Alternating Spanish and Danish as the L1 and L2, they suggest that Manner and Motion should map together, in a manner similar to the mapping across typological boundaries. They note that the tendency of Spanish NSs of L2 Danish "will be to overgeneralize a single manner verb or a small number of such verbs to all communicative contexts" (p. 148). Nevertheless, because they do not continue their discussion of overgeneralization, it remains unclear why NSs of a language that do not usually conflate manner in the verb root would use them in more contexts than they should.

4.1 OVERGENERALIZATION IN L2 V-LANGUAGES

Inagaki (2001; 2002; 2006) helps answer many questions about the nature of overgeneralization in L1 V-languages. Though superficially his studies of Japanese NSs learning L2 English seem incongruous to this argument about Spanish, Inagaki (2001; 2002; 2006) has helped advance research bi-directionally between L2 V- and S-languages (Cadierno & Lund, 2004), of which both Japanese and Spanish are instances (Talmy, 1985). Inagaki (2001) uses techniques popularized by White (1991) for classifying French and English: coupling languages in a subset/superset relationship.[7] In his case, Inagaki (2001) describes English as the superset and Japanese as the subset since "English allows a wider range of motion verbs to occur with a goal PP than Japanese" (p. 155). He means that English has a larger grammar in this respect in the sense that Motion verbs can occur in more environments in English than in Japanese. To help clarify this point, consider the following examples from Inagaki (2001):

(8) ?**John-wa* *ie-no* *naka-ni* *aruita.*
John-TOP house-of inside-at walked
"John walked into [sic] the house." (p. 158)

(9) *John walked into the house.* (p. 154)

(10) *John-wa* *ie(-no naka)-ni* *aruite* *itta.*
John-TOP house(-of inside)-at walking went
"John went into [sic] the house (by) walking." (p. 158)

(11) *John went to school (by) walking.* (p. 154)

These examples show the subset/superset relationship between Japanese and English. For instance, Inagaki's (2001) results show that "Japanese speakers rated [PP + MANNER V]

[7] This relationship is somewhat idealized and is not to be considered mathematically perfect.

significantly lower than the other two sentence types" (p. 161). This means that (8), the word-for-word translation of (9), is ungrammatical (or at least questionable) in Japanese because it is of the PP + MANNER V categorization. Inagaki, (2001) states, however, that (10) is the clearest way of expressing the same idea as (9) in Japanese. (11) is not natural sounding enough for the English NS participants, who report having perceived the sentence as quite marked. This response does not affect the subset/superset relationship because these English NSs were asked to judge the naturalness, not the grammaticality, of each sentence. Therefore, their responses are overgeneralizations on the part of the English NS participants.

By definition, overgeneralization in an L2 is associated with NSs of a superset language that are learning an L2 subset language. Conversely, undergeneralization in an L2 is the cause of a subset language being the L1 while a superset language is the L2. This theory predicts that undergeneralization is easier for non-native speakers to overcome than overgeneralization, because there is positive evidence in the input suggesting that the form previously assumed to be ungrammatical does exist (Inagaki 2001; White, 1991). They argue that recovery from overgeneralization, on the other hand, may only be possible if speakers are presented with negative evidence on a case-by-case basis, something that White (1991) finds effective only in the short term. Therefore, Inagaki (2001) shows that overgeneralization can even occur in speakers at a more advanced L2 level. He shows that this is so because there is no positive evidence in the input showing that (8) is ungrammatical. This dichotomy of over- and under-generalization is intertwined with L1 transfer as well.

With regard to over- and under-generalization, Montrul (2001) also considers Manner of Motion verbs in a way relevant to L1 transfer, though the bulk of her argument has to do with the patterns of transitivity alternation in Spanish versus those of English. She studies speakers of

Spanish, English, and Turkish to see whether L1 transfer effects are in place between the native and non-native forms of these languages.

The most important point in her discussion for this thesis is that Manner of Motion verbs receive a different treatment in English and Spanish depending upon their appearance with a goal PP. This is best shown in the following examples:

(12) English:
a) The soldiers marched
b) *The captain marched the soldiers[8] (p. 174)

(13) Spanish:
a) Los soldados marcharon
b) *El capitán marchó a los soldados (p. 174)

However, Montrul (2001) also shows, through a comparison of (14) and (15), the two languages differ when a locative PP (underlined) is added:

(14) English:
The captain marched the soldiers <u>to the tents</u> (p. 174)

(15) Spanish:
*El capitán marchó a los soldados <u>hasta el campamento</u> (p. 174)

Similarly, returning to Inagaki (2001), he too shows that transfer occurs between the speakers of L1 English learning L2 Japanese. These speakers prefer one L2 Japanese structure to another, even while Japanese NSs are impartial between the two. Between (8) above and *John-*

[8] While the ungrammaticality of this sentence may be questioned, it is irrelevant to the present discussion. This is because regardless of its grammaticality (14) and (15) show that English has a larger grammar than Spanish concerning Motion verbs. Therefore, even if **Error! Reference source not found.**b is found to be grammatical, it still furthers the argument presented in this thesis. More generally, when an intransitive Manner of Motion verb is causativized, it will behave in the same way as its transitive counterpart. (eg. *The top spun into the hole* intr. *John spun the top into the hole* tr. *The coins fell out of his pocket* intr. *He pulled the coins out of his pocket* tr. But not **He fell the coins out of his pocket*).

wa aruite ie(-no naka)-ni itta "John walked and went into [sic] the house," Japanese speakers have no preference, though English speakers definitely favor (10) (p. 158). L1 transfer best explains the English speakers' partiality because they base the grammaticality of the structure on the grammar of English, not the grammar of their L2. Specifically, transfer occurs because in English, (10) is marked but grammatical, whereas "John walked and went into [sic] the house" is ungrammatical. The preference therefore is for speakers to allow that which is in their native grammar and to disallow that which is not, a process otherwise known as L1 transfer.

Assigning Spanish and English to a subset/superset relationship is justified by the similarities between Japanese and Spanish. Montrul (2001) shows that English can create two Motion Situations in many circumstances while Spanish is limited to one. This is also shown in Stringer's (2006; 2007) data, which is discussed in the next section.

4.2 THE DUAL TYPOLOGY OF ENGLISH

Inagaki's (2001; 2002; 2006) basic premise that English is a superset and V-languages are subsets of it is questioned by Stringer (2007), who notes some errors in Inagaki's methodology. For that matter, Stringer (2007) also recognizes some of Talmy's oversights. His main point is summed up when he says "differences are argued to be between individual lexical items rather than particular languages, and the relevant syntactic principles appear to be in place from the earliest tested stages of development" (Stringer, 2007, p. 585). He means that the differences between S- and V-languages should be studied through an analysis of individual words and by recognizing sub-patterns in them rather than through an analysis of each language as a whole.

Stringer's (2006; 2007) investigation involves an elicited production task using what he calls "the monkey book," a wordless picture book. This book consists of a series of pictures depicting a parrot who has stolen a monkey's banana. The monkey is compelled to chase the parrot through several scenes (Stringer, 2006; 2007). The participants in the study were NSs and L2 learners of Japanese, French, and English. Looking specifically at Path conflated PPs when no Path conflated verb is present, Stringer (2007) asked participants to describe the story. Utterances describing Path are coded differently from those expressed in other ways.

Stringer (2007) explains that the coding scheme is necessary to offer a more detailed look at the broad examples that Talmy (1985) puts forth. He states that "a distinction must be made between inherently directional predicates such as English *into* and locational predicates that require a particular syntactic environment to take on a directional meaning, such as Japanese *ni*, 'in/on/at/to', French *à* 'at/to' and English *in*" (Stringer, 2007, p. 593). Therefore, he recommends that further research take into account these differences by means of more detailed coding of each of the two types of Motion Situation. For example, Stringer (2007) mentions that the Japanese and French equivalents of the Motion verbs *run*, *swim*, and *jump* may combine with locative prepositions, while those of *walk*, *dance*, and *splash* may not; rather they can only combine with directional prepositions. Therefore, a sentence such as *The boy splashed into the water* is possible in English, while its Japanese and French, and Spanish equivalents are not. Stringer (2007) is careful to point out that any two lexical items are never cross-linguistically equivalent, and "*run*, *jump* and *fly* invariably have distinct syntax and semantics from their analogues in other languages" (p. 593). He means that these differences are not due to the typology of these languages. Rather, there are individual differences within these two types that lead Stringer (2007) to call for a finer-grained analysis of the patterns involved.

The data that Stringer (2007) finds supports his theory that English NSs may actually be able to acquire Japanese Motion Situations at the advanced stages, contrary to Inagaki's (2001) findings, regardless of their initial overgeneralizations. He claims that this is because of the variation that individual lexical items exhibit within the syntax of any language (Stringer, 2007). He ends his argument by stating that the subset/superset argument that Inagaki (2001) proposes is not viable, and that Motion Situations should be learnable because "what must be acquired is the argument structure associated with particular lexical items" (Stringer, 2007, p. 594).

Therefore, Stringer (2006; 2007) calls for a finer-grained analysis of individual lexical patterns. Indeed, he begins this process in Stringer (2006). Looking at the different structures of deictic expressions in PPs, Stringer (2006) finds that these constructions are acquired cross-linguistically in the same order. Though his study focuses on L1 acquisition, he suggests that because the acquisition stages of deictic PPs follow the same ordering, there should be similar findings in an L2 study that uses similar methodology.

Using the same monkey book as described on page 17, Japanese NSs as well as English NSs children aged 3-7 and adults were asked to perform a grammaticality judgment task (Stringer, 2006). The participants listened to a robot tell the story that was shown on the pages of the book. Participants were asked to give the robot a piece of candy that they were told he liked if he said the sentence correctly, or a piece of licorice, which he didn't like, if he was incorrect. They judged five distinct combinations of deictic, geometric Path, and Manner verbs that combine in different ways in English and Japanese.

As Stringer (2006) points out in his study, there is a universal acquisition hierarchy of underlying principles, specifically when looking at the area of syntactic categories. The implications of his findings for L2 acquisition are therefore that "despite differences in fine-

grained semantics and pragmatics, aspects of the *syntax* of deixis appear to be uniform across languages, throughout the acquisition process, and in both the VP and PP domains" (p. 268, emphasis in original).

Pinker (1989) already points to the necessity for a finer-grained analysis. He discusses this difference in level of detail as a difference in narrow- versus broad-range rules. Looking mainly at the dative alternation in English, he proposes that there is a need for finer-grained analysis of certain structures. His main argument for this is that it is possible for an English NS to violate a narrow-range rule, though broad-range rules must be obeyed. A broad-range rule is one that universally governs all constituents in a larger category. For example, "**She drove Chicago the car*" (p. 152) is a violation of a broad-range rule that requires a change of possession in order for dativization to occur. Conversely, a narrow-range rule is one that affects a sub-category of the broad-range rule. Therefore, a sentence such as "**She pulled John the suitcase*" (p. 152) follows the broad-range rule of change of possession. However, it does not follow a number of narrow-range rules, such as ballistic motion, and is therefore ungrammatical. Pinker (1989) states that both narrow- and broad-range rules are necessary because "languages have a deep-seated conservatism built into their lexicons. Regardless of how pervasive a generalization across existing pairs of lexical entries may be, the default condition is not to allow new entries to be added freely by individual speakers" (p. 162). Words that are added, though, do so because they share many commonalities with other words in the language, though their meaning is more specific. For this reason, Pinker (1989) suggests that narrow-range rules may be more useful to certain studies. Though she does not use the term "narrow-range rule," Morimoto (2001) is also of the opinion that research should be based on a finer-grained analysis, as will now be discussed.

4.3 A FINER-GRAINED ANALYSIS OF SPANISH

Morimoto (2001) separates Motion verbs into two distinct categories: Displacement Verbs (VD—*Verbos de Desplazamiento*) and Manner of Motion Verbs (VMMs—*Verbos de «Manera de Moverse»*). She shows how this is a necessary component of the study of Motion Situations in Spanish because the two categories are found in different environments. Additionally, she states that the two verbal types are structured conceptually in a different way than they are grammatically. Therefore, Morimoto (2001) clearly states that "estos estudios requieren estudios específicos y en profundidad sobre la estructura argumental de los verbos en cuestión, por un lado, y la relación entre el significado léxico y la estructura argumental de los predicados en general, por otro" (*these studies require specific and in-depth research into the argument structure of these verbs on the one hand, and the relationship between the lexical meaning and the argument structure of the predicates in general on the other*; p. 19).

Morimoto (2001) demonstrates that in Spanish the VMMs can be subdivided in two further classes. She adds an important feature to the conceptual structure of Spanish verbs, mainly trajectory, which is an inherent part of all VDs. Therefore, these verb categories necessarily take a prepositional phrase, as is the case with lighter verbs *ir* 'to go,' *venir* 'to come,' and *entrar* 'to enter.' However, VMMs do not all follow one single pattern, rather two: Internal Manner of Motion (VMMIs—*Verbos de «Manera de Moverse» Interna*) and External Manner of Motion (VMMEs—*Verbos de «Manera de Moverse» Externa*). The difference between these two verb classes is not a difference in whether Manner is a part of the verb, as is the difference between VDs and VMMs in general; rather, both express Manner.

Verbs categorized as VMMI, including *patalear* 'to stomp,' *balancearse* 'to swing,' and *bailar* 'to dance,' express a type of Manner of Motion produced only auto-kinesthetically, or

reflexively, with no possible trajectory. There is no trajectory because the Ground, in direct relation to the Manner and Path—not necessarily the Figure—is undefined. For instance, *balanacearse* 'to swing' is a type of movement that a Figure does internally rather than in relation to a Ground. Therefore, while *Se balanceó en una cuerda* 'He swung on a tightrope' is grammatical, **Se balanceó a través de una cuerda* 'He swung across a tightrope' is ungrammatical.

Conversely, VMMEs, such as *correr* 'to run,' *caminar* 'to walk,' and *volar* 'to fly,' can reference trajectory, which allows Path PPs to follow them. This means that a sentence such as *Nadó en un río* 'He swam in a river' is just as grammatical as *Nadó a través del río*. 'He swam across the river.' It therefore proves necessary to separate verbs into these two categories. Additionally, VMMEs express an element of displacement, while VMMIs do not. Consider the following examples:

(16) **Bailamos muchos metros.*
danced-3pl many meters
"We danced many meters." (p. 49)

(16) shows that a VMMI verb such as *bailar* 'to dance' is incompatible with a delimited trajectory. This is in direct contrast with (17) where the VMME *caminar* 'to walk' is shown to be compatible with such delimited measure phrases.

(17) *Caminamos muchos metros.*
walked-3pl many meters
"We walked many meters."

In a study of Motion Situations of Spanish, it is necessary that one not make too broad a generalization. Rather, as Stringer (2006; 2007), Pinker (1989), and Morimoto (2001) show, these two verb categories should be treated as separate entities. Particularly when attempting a discussion of the L2 Spanish of English NSs, the two examples above show quite clearly that the

VMMs of English are not categorized in the same way as those of Spanish; both English glosses are equally acceptable, regardless of the additional element of trajectory. Therefore, Stringer's (2006; 2007) argument, that the structures of verb patterns must be specifically acquired by L2 speakers, is borne out. However, as Inagaki (2001) correctly points out, English NSs overgeneralize in their typologically different L2, though this comes from more specific verb patterns, rather than an overarching one. It seems that Talmy's (1985) typology does not necessarily account for all the problems L2 Spanish speakers must contend with; rather, it is the differences between VD, VMMI, and VMME that give them the most trouble. Specifically, this is because the acquisition of the argument and conceptual structure of these verbs requires specific negative evidence.

4.4 ADVANCED LEARNERS OF ROMANCE LANGUAGES

Therefore, it is important to show in a practical sense that a fine-grained analysis can return robust results and aid in future studies. It is also important to show that there are a variety of ways to go about the analysis. Harley (1989a) uses a method that highlights the errors that advanced students of French immersion make in their compositions. She finds that even these advanced L2 French students are not fully able to acquire Motion Situations when their first language is English (Harley, 1989a; Harley & King, 1989).

Each of the two separate studies looks at the acquisition process of English NSs as they were immersed in a French classroom. In the first of these studies, Harley and King (1989) set out to quantitatively analyze the types of L2 production errors of certain verb tokens. They begin by mentioning that students perceive their shortcomings in language as stemming primarily from

their lack of vocabulary. Therefore, Harley and King (1989) predict that L2 learners initially assume a structure of word-for-word translation from their L1 and they will put this working hypothesis to use based on their perception of lexical rules. Simply put, all lexical items in a student's L2 will fit neatly into the syntax of their L1. In order to test their hypotheses, Harley and King (1989) do a detailed analysis of the compositions of 22 French NSs in comparison with those of 22 French L2 learners. Their findings indicate that L2 learners are "relatively more likely to select high frequency verb types than the NSs while drawing on a smaller pool of verb types" (p. 421). Though Harley and King (1989) do not explicitly mention the typological difference between French and English, as Talmy (1985) does, the data they present shows that there is a dichotomy between the type and frequency of verb use between the groups. For instance, the French NSs made much greater use of verbs conflating Manner and Path, such as *arriver* 'to arrive,' *descendre* 'to descend,' and *monter* 'to rise' (Harley & King, 1989). On the other hand, the L2 learners made much greater use of lexically light verbs such as *aller* 'to go' and *venir* 'to come.'

These findings are similar to those of Harley (1989b), who not only investigates the cross-typologically distinct L2 items, but also looks at these items as produced by advanced learners. Harley (1989b) shows that many advanced speakers are unable to fully acquire the structure involved. For the most part, the items Harley (1989b) studies are identical to those mentioned in Harley and King (1989), which are gathered through the implementation of an in-class composition (Harley, 1989a). The task, aimed at elementary school students of L1 French and L2 French immersion, involves writing a composition about the recovery of a kitten from a tree. The first two introductory sentences are written for them in French and the participants are

asked to complete the story in twelve sentences. The results show that the L2 students, as expected, rely more heavily on prepositions than the French NS students.

Therefore, combining the results of both Harley and King (1989) and Harley (1989a), it is clear that many English NSs of advanced L2 French have not completely acquired the differences in the conflation patterning between the two languages. Since Spanish and French are both Romance languages and typologically similar, it is likely that advanced speakers of Spanish will not be able to cross the typological boundary completely, particularly with respect to the differences between the conflation of Manner and Path in Motion Situations. Additionally, because romance languages and Japanese are also similar typologically, the types of transfer shown above between English and Japanese should be found between English and Spanish as well.

For reference, Table 1 summarizes all previous empirical studies in relation to crossing typological boundaries, even though not all of them are fully discussed in this thesis:

Table 1. Comparison of authors and the languages they discuss

V-language to S-language			**S-language to V-language**		
Author	*L1*	*L2*	*Author*	*L1*	*L2*
Inagaki	Japanese	English	Inagaki	English	Japanese
Stam	Spanish	English	Stringer	English	Japanese
Özyürek	Turkish	English	Harley; Harley & King	English	French
Negueruela et al.	Spanish	English	Negueruela et al.	English	Spanish

5.0 *FROG, WHERE ARE YOU?* AS INSTRUMENT

Modifying a methodology pioneered by Bamberg (1987), Berman and Slobin (1994) are able to categorize event conflation patterns in several languages, including English and Spanish. They begin by documenting the responses of 60 participants from each of five different languages. The participants are divided by age into five groups of 12 members each, at three, four, five, and nine years of age as well as adults. Their goal is to categorize the responses into the subgroups of Tense/aspect, Event conflation, Perspective, and Connectivity.

Using Mayer's (1969) *Frog, Where Are You?*, a wordless picture book, investigators ask participants to retell the story presented in the book. The book depicts the adventures of a young boy and his dog as they search for their frog, who escaped from captivity as they slept. The participants are given the book and asked to become familiar enough with it to be able to retell the story to an investigator. The children are audio-recorded during their story-telling, and the transcriptions are then analyzed. During the retelling, investigators do not prompt participants, except when necessary, and even then, only in limited ways, such as silent nodding and the use of discourse fillers.

Berman and Slobin (1994) are able to categorize many ways of conflating events, which they define these in the results sub-section of each language chapter. The chapters on English and Spanish are of particular interest to the current study in that they lists all of the Motion verbs that are produced and their individual co-occurrences. Additionally, they exemplify many of

these and discuss their implications. For example, Berman and Slobin (1994) are able to show that as children grow older, "They rely less on polysemous verbs and idiomatic VERB + PARTICLE combinations […] And they make increased reference to **manner of motion** — e.g., *The boy splashed into the water*" (p. 153, all emphases in original).

While they begin this important collection of data of several languages with the ultimate goal of categorizing various features, the overall hypotheses are quite vague. However, they lay the groundwork for Slobin (1996), where he shapes the "thinking for speaking" hypothesis.

Negueruela, Lantolf, Jordan, and Gelabert (2004) continue testing Slobin's (1996) "thinking for speaking" hypothesis, though their technique is quite different. Instead of simply audio-recording their participants' re-telling of Mayer (1969), they videotape them as well. The objective is to look at gesticulation psycholinguistically as well as event conflation. For the most part, their actual technique is not relevant to this thesis, though their findings are. This is because Negueruela et al. (2004), as Harley (1989a) does, find that even advanced speakers are not able to fully acquire a Romance L2 when coming from an English NS background.

Additionally, they attempt to show that the typological differences among these languages are a major source of an L2 learner's inability to think in a new way that facilitates speaking:

> In the case of L2 speakers, the focus of the present study, the interesting question is whether these individuals are able to regulate their TFS ["thinking for speaking"] activity in complex tasks through the second communicative system […] or whether they continue to rely on their original system. (p. 117)

Their basic premise, then, is that if L2 speakers use the gestures of their L1, they have sufficiently acquired the language to the point where they are actually thinking even at the

subconscious levels in their L2. Their results support their hypothesis that few if any non-native speakers are able to achieve such an advanced level of "thinking for speaking" in their L2 that they use the L2 convention for gestures. However, their analyses of the actual verbal pronunciations that participants make are more related to the perceived intent of the speaker instead of a strict reporting of utterances. In this thesis however, following Morimoto (2001) and Stringer (2007), an analysis of the semantic and lexical meaning of the words will be conducted instead and any perceived intent on the part of the speaker will be ignored.

Negueruela et al. (2004) conclude their study calling for a more refined analysis of the V-language Motion verbs, as in Morimoto (2001), even if they do not refer to this important work. Another limitation of their study is that it would be difficult to replicate it with lower level L2 participants. Since they are studying advanced learners, many potential problems arising from lack of vocabulary, which Dörnyei and Kormos (1998) say can encourage gesture, are disregarded. In fact, the problem of beginning L2 learners and their lack of Motion Situation vocabulary is barely mentioned, if at all, by any researcher.

6.0 COMPENSATING FOR A LACK OF L2 VOCABULARY

In an effort to better understand vocabulary issues, Dörnyei and Kormos (1998) analyze the post hoc comments of L2 English learners collected by Poulisse (1993). Dörnyei and Kormos (1998) explain that utterances were elicited from L2 English speakers of various languages, who were then asked to discuss any problems retrieving vocabulary during their previous utterances. After that, Dörnyei and Kormos (1998) detail specific problem-solving mechanisms that L2 learners rely on during production.

Using the theoretical model of speech production and comprehension by Levelt (1993), Dörnyei and Kormos (1998) find that in speech production if speakers encounter deficiencies in their vocabulary, they typically employ one of the following to compensate for this lack: content reduction, substitution, reconceptualization, or an appeal for help (Dörnyei & Kormos, 1998). These categories comprise several subcategories, though only a few are relevant to the discussion in this thesis[9].

The three subcategories of content reduction are relevant in many situations of language learning. These subcategories, namely message abandonment, message reduction, and message replacement, are quite relevant in many situations of language learning. As its name suggests,

[9] This is because it has been observed that beginning and low-intermediate students use these specific strategies with higher regularity than other stratigies, particularly when attempting Motion Situations. An explanation for why this is so is beyond the scope of this thesis, though it is an intriguing question that further research may attempt to answer.

message abandonment is a strategy of dropping an utterance once the speaker realizes he or she lacks a particular vocabulary item; message reduction is the strategic deletion of a word; while message replacement is the substitution of a different item for the intended one.

While Dörnyei and Kormos (1998) detail many subcategories of substitution, the use of all-purpose words and complete omission are the most relevant forms of substitution to the current discussion. The use of all-purpose words is when L2 speakers add lexical value to a word that it does not normally have. For instance, if a Spanish L2 speaker is trying to say *El perro se cayó de la ventana* 'The dog fell out of the window' but doesn't know the word *caerse* 'to fall,' it is probable that the speaker will use the light verb *hacer* 'to make' in its place. Complete omission occurs when the L2 speaker leaves a gap where the word should occur, while continuing with the sentence as if the word had been pronounced. Using the same example, a student may say *El perro…de la ventana*, omitting the verb *caerse* altogether. In syntactic theory, Van Riemsdijk (2002) refers to these gaps as a phonologically zero or null light verb.

Briefly, Van Riemsdijk (2002) looks at the ability of most Germanic languages to allow for a modal to be the only verb that appears in a sentence. He considers two scenarios, one in which the modal is in fact a main verb, and one in which there is a phonologically empty light verb. Using examples from many Germanic languages, which he categorizes in two different types, he argues that in all cases, the sentences consist of a modal verb and a directional PP, which suggests that there is inherent Motion being expressed, through the use of these two lexically light constituents. Van Riemsdijk (2002) concludes that the semantics of the Motion verbs are "completely bleached in the sense that no meaning beyond the pure notion of motion is conveyed. This was the reason for always referring to the empty verb as a 'light' motion verb" (p. 192). Therefore, though English falls into the type that does have this parameter set, it is quite

closely related to several languages that do, such as Dutch and German. This means that there is minimal resetting of parameters that English speakers must do in order to be able to accept a phonologically null light verb.

Though null light verbs are assumed to have a syntactic basis, their surfacing may often be triggered through lack of a vocabulary item. Importantly, then, both syntactic and lexical issues must be accounted for when approaching a study of Motion Situations. Furthermore, especially at the lower levels of second language learning, problems with vocabulary will be frequent and obvious (Dörnyei & Kormos, 1998). Consequently, by focusing an investigation of individual vocabulary problem-solving strategies on one precise difference between the two languages, the specific strategies that L2 learners employ will become more apparent and specialized. Therefore, the lexico-syntactic interface must be taken into account during primary source data collection and analysis. Specifically, by focusing on the L2 Spanish production of Motion Situations, different strategies for deficiencies in vocabulary among different levels are likely to surface. These strategies must be identified, and specific controls should be implemented in order to limit their effect on the gathering of L2 production data.

7.0 CURRENT INVESTIGATION

At this point, it will be useful to summarize the literature that has been reviewed in this study up to this point:

Two distinct typological differences in the world's languages are relevant to the present study. One of these expresses Motion and Path in the verb root with any Manner information being added as a supplement, while the other expresses Motion and Manner in the verb root with additional Path information in a satellite (Talmy, 1985). The former type is described as a V-language and exemplified by Spanish (Talmy, 1985). The latter is the S-language type, which is best represented by English (Talmy, 1985). Because of fundamental differences between S- and V-languages, English NSs may have more trouble learning how to describe Motion Situations correctly in L2 Spanish than they might have learning another S-language (Slobin, 1996). Partly, this problem may be because Spanish is a more constrained type, and though the S-language pattern is the default in English, English can actually express Motion Situations following either pattern of conflation. (Inagaki, 2001; Montrul, 2001; Stringer, 2007). For this reason, English is a superset of Spanish in terms of Motion Situations, which may make quite difficult the achievement of advanced speaker status in L2 Spanish particularly when dealing with Motion Situations (Stringer, 2007; Inagaki, 2001; Harley & King, 1989). Nevertheless, most attempts to test advanced speakers do not account for an inherent lack of L2 Manner of Motion vocabulary. Since beginning and low-intermediate level L2 speakers typically have relatively limited

vocabularies, an answer to this question may lie in this missing piece of research (Dörnyei & Kormos, 1998).

Therefore, the literature reviewed makes clear the theoretical background to investigate the differences between the ways that Spanish and English NSs express Motion Situations (Talmy, 1975; Slobin, 2000; Cadierno & Lund, 2004; Inagaki, 2001). Additionally, it shows a difference between Motion verbs with locational interpretations versus those with directional ones, which must be accounted for (Stringer, 2007). Looking specifically at Spanish, the literature demonstrates the intricacies of certain verb types, and shows that they must take into consideration when conducting an analysis of Spanish Manner of Motion Verbs (Morimoto, 2001). The literature also makes it clear that NSs of Spanish and English experience Motion Situations in ways that facilitate the more abstract verbal expression of these events (Montrul, 2001; Negueruela et al., 2004). Moreover, according to the literature reviewed, advanced L2 learners do not generally cross typological boundaries successfully; rather, these speakers continue to rely on the structure of the Motion Situations in their L1 (Negueruela et al., 2004; Harley, 1989a; 1989b; Harley & King 1989). More specifically, the literature accounts for why English NSs learning Romance languages at the low-intermediate and even advanced stages have trouble crossing typological boundaries (Negueruela et al., 2004; Harley, 1989a; 1989b; Harley & King 1989). As Lantolf (2006) suggests "L1 English learners would have to desensitize themselves to the manner of motion events, and L1 Spanish speakers would have to develop precisely this manner sensitivity when speaking English" (p. 84). The prediction then is that Spanish NSs will have an easier time learning the English conflation pattern for expressing Motion Situations than vice versa. However, this question will remain unanswered here as it is beyond the scope of the current investigation.

In contrast, the research to date, as presented here, has done little to effectively show a definitive link between L2 vocabulary and Motion Situations. Specifically, prior research has failed to adequately link the vocabulary avoidance strategies of beginning L2 Spanish students and Motion Situations, particularly in relation to crossing a typological boundary. However, these questions may be answered if research is done in the area of Motion Situations that accounts for varying levels of vocabulary.

7.1 RESEARCH QUESTIONS

Taking all of this into account, then, the present study will focus on classifying the errors of vocabulary and Motion Situations that English NSs make at the beginning and low-intermediate levels of Spanish. These research questions are as follows:

1) *Have English NSs of beginning L2 Spanish adequately acquired the ability to describe Motion Situations?*
    a. *If so, which conflation pattern do they use: that of L1 Spanish, L1 English, or in between?*
    b. *If not, are there issues that can be attributed to lack of vocabulary?*
2) *How do the results compare to those of low-intermediate Spanish L2 learners? How do they compare to Spanish NSs?*

The answers to these questions may be found through an established measure of data elicitation using Mayer's (1969) wordless picture book, *Frog, Where Are You?*, in addition to its text-based Spanish language version.

7.2 HYPOTHESES

1) *Beginning students will be divided into two groups according to vocabulary level:*
    a. *Participants with smaller vocabularies will use locative PPs and disregard the Motion Situation altogether because of both confusion between L1 and L2 conflation patterns and lack of specific vocabulary items.*
    b. *Participants with larger vocabularies will use all-purpose words due to their lack of understanding of the different conflation patterns.*
2) *Low-intermediate students will have a larger vocabulary and therefore describe the Motion Situation, though the conflation pattern will be that of English, not Spanish.*

To clarify then, the data elicited from beginners should yield a sentence such as the following:

(18) *El niño está en el pedrusco*
the boy is on the boulder
"The boy is on the boulder." (no S_M)

An example such as this is expected to appear when the participants do not have enough vocabulary to fully describe Motion Situations. These participants will likely have quite low scores in the Vocabulary Assessment Task. However, other participants in the beginning group are also expected to generate sentences similar to the following:

(19) **Hace arriba del pedrusco.*
make up of-the boulder
S_M= Mo P G

"He got up on the boulder."

This is expected to be pronounced by participants with higher vocabulary levels than those of the group producing sentences found in (18).

In the low-intermediate speakers' data, a slight shift in the paradigm from those expressed in the previous examples is anticipated. While participants who produce those types of

sentence are expected to score relatively low marks on the Vocabulary Assessment Task, low-intermediate speakers should be able to do well on the Vocabulary Assessment Task. However, they are still likely to produce sentences such as the following:

(20) **Sube arriba del pedrusco.*
ascend up of-the boulder
S_M= Mo+P P G
"He climbs up on the boulder."

This ungrammatical sentence will likely be produced because English NSs do not sense the Path that is inherently conflated in the verb; rather, they assume the verb is conflated with Manner, and therefore need to complement it with Path. It is important to note here that this is a possible structure in their L1. Additionally, though the Spanish NS conflation pattern is also available to the English NSs, this is the more marked form, and therefore the less likely choice in the L2 (Inagaki, 2001).

Accordingly, Spanish NSs will probably describe this sentence in the following manner:

(21) *Sube al pedrusco.*
ascend of-the boulder
S_M= Mo+P G
"He ascends the boulder."

This sentence shows how Motion and Path are conflated in the verb following the V-language pattern.

7.3 METHODOLOGY

Following the lead of many researchers (Bamberg, 1987; Berman and Slobin, 1994), the current study attempts to answer these questions by eliciting data from L2 Spanish speakers using Mayer

(1969). This children's book contains a series of 24 pictures that wordlessly tells the story of a boy and his dog whose pet frog escapes from a jar as they sleep. The following day as they search for their lost frog, they encounter many situations from which they must flee and many places where they think the frog may be hiding. Eventually they find their frog, but he has a family. One of the baby frogs hops over to the boy showing that he wants to be the boy's new pet.

Some Motion Situations that L2 learners are expected to describe are when the frog climbs out of his containing jar, the dog falls out of a window, the bees fly out of their hive, the groundhog and the owl independently pop out of their holes, and the deer races towards a cliff stopping just in time to toss the boy and his dog tumbling into a swamp. The remaining pictures may offer further Motion Situations that will be considered on a case by case basis.

7.3.1 Participants

Three groups of participants were the focus of the current investigation: English NS students of second and fourth semesters of L2 Spanish, and Spanish NSs. No English NSs were recruited because this thesis is a detailed analysis of the early stages of L2 Spanish. Therefore, any English data that may be required will be taken from Berman and Slobin (1994) and cited as such. Students were recruited by flyers placed on campus and asked to contact the investigator via e-mail or phone to set up an appointment for data collection. There, each participant described their language learning history through focused questions. Each group had fifteen participants, who were all students of the University of Pittsburgh between the ages of 18 and 39 (mean=23.4); the mean age for beginning students was 20.8, for low-intermediates was 21.5, and for Spanish NSs was 27.8. Spanish NS were from Chile, Colombia, Ecuador, Honduras, Mexico,

Peru, Puerto Rico, Spain, Uruguay, and Venezuela. No L2 participants had any Romance language experience outside of taking Spanish classes at the University of Pittsburgh.

In the current investigation, the entirety of Mayer (1969) was scanned into Revolution, which is a program that can be designed with various types of tasks and activities. The program designed for this study walked students through each step, a page at a time. The first page welcomed the participant and asked for the unique code number that the investigator had given them; this kept the data organized and uniquely coded through the process of analysis. On the second page, participants checked their sound to ensure that their microphone was functioning properly. Then students encountered a page of brief instructions that outlined the four parts to the current study: a movie, a Picture Description Task, a Cloze Task, and finally a vocabulary matching task.

7.3.2 Materials and Procedures

7.3.2.1 Picture Description Task

The first task that participants were presented with was to watch a QuickTime movie made from the entirety of Mayer (1969). This was a computerized version of the Berman and Slobin (1994) task which allowed participants to familiarize themselves with the frog story. This was also believed to enhance the participants' feeling that the movie was a series of sequential events, moving forward in an uninterrupted manner.

The movie consisted of 49 frames and lasted a total of four minutes and eight seconds. The first 24 frames were scanned, electronic versions of each page of Mayer (1969) shown for four seconds before the next appeared. The 25th frame was shown for eight seconds and informed them that they would see the movie again, this time with some objects labeled in Spanish. The

last 24 frames were therefore the same pictures as the first 24, only each frame was shown for 6 seconds and these frames also had the Figures and Grounds labeled in Spanish (e.g. *rana* 'frog,' *niño* 'boy,' *perro* 'dog,' *jarra* 'jar,' *pedrusco* 'boulder,' and *hoyo* 'hole'). The labels were designed to familiarize participants with any unknown L2 vocabulary and possibly allow them to play out the narration mentally before actually verbalizing it in the recording. They were not allowed to repeat the viewing of the movie.

On the next page, participants were instructed that the following page would bear the first of the pictures in the previous movie. Participants were instructed to use all labeled objects in as few sentences as possible, an attempt to focus their attention on Motion, Manner, and Path by not producing an excessive number of sentences. They were asked to retell the story in the past tense. This was not an attempt to elicit these structures; rather, it was believed to help guide participants in relating the individual pictures in a unit. Participants were assumed to be more likely to describe the pictures as a complete story if they saw them as a linked series of past events. They were recorded as they retold the story in the past tense of Spanish, relating as many of the labeled objects as possible to one another. When ready, students clicked on a button that began the recording and automatically moved on to the next page.

The labels remained and the time limits were removed as participants scrolled through each of the pictures one at a time recording a narration. The prevalent Figures and Grounds in each picture were labeled with text either close to or on top of the nouns and no labels indicated any sort of Motion, Manner, or Path. The explicit purpose of retaining the labels was to eliminate any lack of noun vocabulary since many objects are not commonly taught in a classroom setting, and therefore possibly little known by beginning and low-intermediate college students. Retelling the story without the labels would likely have been impossible particularly for the

beginning students. Additionally, this robust visual stimulation made compulsory to all participants, both native and otherwise, the focusing of attention specifically on the labeled objects and the relationships between them.

7.3.2.2 Cloze Task

After recording, the participants were presented with another instructions page. This portion of the experiment was designed to measure any discrepancies students may have had regarding their vocabulary of Motion Situations. The participants were therefore asked to fill in the blanks of a Spanish language retelling of the story based on Miller et al. (2006), who offer Spanish and English versions of the text. Slight modifications were made for consistency between the nouns in this text version and the Picture Description Task. Additionally, all 28 Motion verbs and any following prepositions were deleted and replaced with an empty text field. Participants were asked to type the most appropriate words (one to three words) for the context of the sentence in the field.

The main purpose of this task was to discover inconsistencies between what verbs students know in the speaking activity versus those they can recall in a specific written context. Presumably, if participants are unable to produce the verbs during both a Picture Description Task and a Cloze Task, they may not have acquired the word in a fully-contextualized and productive way.

7.3.2.3 Vocabulary Assessment Task

The final part of the study was designed to formally assess each of the participants in order to determine the average number of words each participant had acquired from the 1000 most frequently used Spanish words. The test was a version of Nation (n.d.) translated and adapted for

Spanish. In order to be tested, each Spanish word must have been a member of the 1000 most frequently used words in Spanish (Davies, 2001). Special focus was placed on the Motion verbs in order to specifically test those which appeared both on the list and in the anticipated elicitation.

This task was divided into ten sections, six on the first page and four on the second (see Appendix C). Each section consisted of six numbered Spanish words in the left column and three English equivalents in the right column. Each of the English entries was alongside a drop-down menu containing the numbers 1 through 6. Participants were asked to choose the Spanish word that best represented the translation of the English word and then select the number from the drop-down list that corresponded to the Spanish translation.

This computerized method was chosen instead of a paper version, as Nation typically administers, to keep all of the data from each participant coded similarly and therefore inseparable from the rest of the participant's responses.

7.3.2.4 Procedures

The data were collected in the Robert Henderson Language Media Center at the University of Pittsburgh over two weeks. No more than four participants were tested at a single time and each used a separate Macintosh computer. Because the Media Center is also used as a classroom, the computers are aligned in rows. On the occasions where there was more than one student, they were seated in the first row at the far right computer, in the second row at the far left, and so on. This was to avoid them overhearing and reading the screens of other participants.

On several occasions during the recordings participants asked the investigator what they were supposed to do if they were not able to recall a word. They were told to do whatever came naturally. Most non-native participants typically finished the narrative in 20 to 25 minutes; it

generally took 10 to 15 minutes for each NS to complete the task. At the end of this test, participants were thanked for their contribution and the Revolution computer program saved the sound, text, and numerical files to a CD-Rom. These data were then analyzed according to the type of data that was elicited as described below.

7.3.3 Data analysis

7.3.3.1 Vocabulary Assessment Task analysis

The raw scores collected from the Vocabulary Assessment Task, were entered into an Excel spreadsheet. Using the program's COUNT function, the number of incorrect answers was tabulated. This returned the number of vocabulary errors per student as well as a separate number of vocabulary errors per item. Two of the thirty sections were then eliminated because the native Spanish speakers were inconsistent in their answers. As Nation's (n.d.) vocabulary test is designed to represent a 1000 word vocabulary, a percentage of this level of vocabulary was calculated. Additionally, the two sections of the test that dealt specifically with Motion verbs were analyzed separately in order to return an average number of these important items.

7.3.3.2 Analyses of Cloze and Picture Description Tasks

Because both the Cloze and Picture Description Tasks looked at specific verbal representations of the Motion Situation, they were analyzed in similar manners, though separately. A fine-grained analysis classifying the seven types of verbs listed below was necessary to determine the independent measures of the recordings. Each frame of Mayer (1969) was analyzed for relevant Motion Situations. For instance, in the second frame of the story, the frog is shown climbing out of its jar while the boy and his dog sleep (see Appendix A). This situation was labeled *Frog*

climbing out of jar. The sound files of each participant were transcribed and a table was made that showed the possible Motion Situations and the number of responses each group made. For this situation, there was a wide variety of responses, one of which was *La rana salió de la jarra* "The frog exited the jar." However, the variety of responses was able to be reduced to a smaller number of responses due to their similar structures. Using a modified version of the coding scheme that Morimoto (2001) describes, each of the responses was tabulated and the specific response type counted. The answers fell into one of the following categories:

BarePP — Complete sentence where the NP is followed immediately by a PP with no phonologically pronounced verb
— e.g. *El niño sobre del venado.*
The boy on the deer.

Engl — English verb or Hispanicized English verb
— e.g. *El niño finds marmota*.
The boy finds a groundhog.

LightV — Non-Motion light verb used to describe the Motion Situation
— e.g. *El perro va a hacer en la tierra*.
The dog goes to do on the ground (meaning 'the dog is falling')

StatLoc (*Stative locative*) — Description of the scene without mention of a Motion Situation
— e.g. *La rana está en la jarra*.
The frog is on the jar.

VDP (*Verbo de Desplazamiento Pesado*) — Heavy Displacement Verb (verb of relocation with robust lexical meaning)
— e.g. *La rana sale de la jarra*.
The frog exits (from) the jar.

VDL (*Verbo de Desplazamiento Ligero*) — Light Displacement Verb (verb of relocation with little lexical meaning)

— e.g. *El niño va al pedrusco*.
The boy goes to the rock.

VMME (*Verbo de Manera de Moción Externa*) — Manner of External Motion Verb

— e.g. *Corrió hacia un precipicio*.
(It) ran towards a cliff.

VMMI (*Verbo de Manera de Moción Interna*) — Manner of Internal Motion Verb

— e.g. *El perro brincaba*.
The dog was jumping.

\+ — Signals an additional element of a Goal PP or a Manner gerundive to any one of the categories above

8.0 RESULTS AND DISCUSSION

The Spanish NSs completed the Vocabulary Assessment Task with an overall accuracy rate of 99.3%, the low-intermediate speakers with 83.1%, and the beginning students with 71.4%. Of the 12 Manner of Motion verbs the Spanish NSs made no errors, while the low-intermediate Spanish L2 learners had an accuracy rate of 95.7% and the beginning students 69.1%. One unexpected result was that the beginning students were not able to be separated into two groups according to vocabulary level. Instead, in relation to one another, students all received relatively uniform scores. Table 2 is a synopsis of this data:

Table 2. Mean vocabulary per group

	Beginning	*Low-intermediate*	*Native speakers*
Overall	71.4 %	83.1 %	99.3 %
Motion Verbs	69.1 %	95.7 %	—

This shows as expected that the beginning students have less vocabulary than the low-intermediate students do. Also as expected, the Spanish NSs have the highest vocabulary of the three groups. The .7% discrepancy may be due to the lack of English vocabulary of one Spanish NS; however, there was no assessment of their English proficiency.

Though the low-intermediate overall score is lower than it is for the Motion Verbs, it is important to note that three items were particularly troublesome for low-intermediates. This is

not the case for beginners or NSs. The results for the three items by the low-intermediates are 50% on each, which lowers the overall percentage by 8%. Therefore, were it not for these items, the overall score would be higher than the score on the Motion Verbs, an expected result.

8.1 PICTURE DESCRIPTION TASK

Turning then to the classification of the Motion Situations during the Picture Description Task shown in Table 3, the Spanish NSs overwhelmingly prefer Heavy Displacement Verbs (VDPs), such as *salir* 'to exit,' *subir* 'to rise,' and *perseguir* 'to chase.' There are 119 instances of this type of verb in the recordings. One of these was immediately followed by a Motion conflated gerundive phrase and thus classified as a VDP+, which are exemplified by *salieron volando*

Table 3. Instances of types of Motion Situations in the Picture Description Task

	Beginning	*Low-intermediate*	*Native speakers*
BarePP	14 (9.4%)	7 (5.5%)	—
Engl	4 (2.7%)	26 (20.3%)	—
LightV	5 (3.4%)	—	—
StatLoc	59 (39.6%)	28 (21.9%)	4 (1.6%)
VDL	23 (15.4%)	18 (14.1%)	27 (10.9%)
VDL+	—	—	13 (5.2%)
VDP	22 (14.8%)	16 (12.5%)	118 (47.6%)
VDP+	—	—	1 (.4%)
VMME	22 (14.8%)	33 (25.8%)	85 (34.3%)
Total Tokens	149	128	248

BarePP – No verb; Engl – English VP or PP; LightV – Lexically weak verb; StatLoc – stative locative; VDL – Light Displacement Verb; VDP – Heavy Displacement Verb; VMME – Verb of External Manner of Motion

'exited flying.' Spanish NSs do not use any constructions with BarePPs or English verbs. On four instances NSs did not attended to the Motion Situation instead describing the scene with a stative locative (StatLoc) phrase such as *estaba en* 'was in.' Verbs of Internal Manner of Motion (VMMIs) were avoided altogether, though 85 Verbs of External Manner of Motion (VMMEs) like *correr* 'to run,' *escapar* 'to escape,' and *caer* 'to fall' appeared in the recording, the second most common type of Motion Situation. Light Displacement Verbs (VDLs) such as *ir* 'to go,' *llevar* 'to bring,' and *mover* 'to move' were used on occasion, being pronounced 27 times, plus six additional times where lexical information was added in the form of an infinitive verb. The addition of Motion gerundive phrases to non-motion verbs was uncommon but did occur 7 times. Here, the scores of the non-NSs will be checked against the scores of the NSs to determine whether they are learning the Spanish way of describing Motion Situations.

However, unlike the NSs, the low-intermediate Spanish L2 learners had a more uniform classification with no one specific type overwhelming the results of the others. Instead, though VMMEs, as in *Las abejas corren después del perro* 'The bees ran after the dog,' were preferred, being used 33 times, StatLocs, such as *Búho estuvo en el árbol* 'An owl was inside the tree,' were a close second, a total of 28 times. An even closer third place, English verbs were used 26 times. VDLs were more numerous than VDPs, 18 to 16 times, respectively. Bare PPs were rare, though speakers found them necessary on seven occasions. It seems that the low-intermediates have not yet acquired the Spanish L1 convention of describing Motion Situations with mainly VDP type verbs.

Similarly, the data from the beginning Spanish L2 learners show that they have not yet acquired this convention either. Offering more tokens overall than low-intermediates, beginning Spanish L2 learners preferred StatLocs like *El perro está debajo de la ventana* 'The dog is

beneath the window' when the Motion Situation was evident in the picture. They used this construction 59 times. VDLs, VDPs and VMMEs were nearly tied at 22 each, though there was one extra instance of a VDL, as in *El perro va a la tierra* 'The dog went to the ground.' The beginning Spanish speakers used more BarePPs than both of the other groups and were quite common, being used 14 times. Remarkably, these speakers did not resort to English as often as the low-intermediate students did. In fact, there are only four instances. Similar to the low-intermediate L2 learners and even the NSs, these speakers used many irrelevant utterances that did not classify as Motion Situations. These data have not been reported. Curiously, though, they have a higher percentage of VDPs than the low-intermediates do. This will be discussed further in section 8.3 below.

As Table 3 summarizes, Spanish NSs overwhelmingly provide instances of VDPs and VMMEs. The most common of these were *salir* 'to exit,' *seguir* 'to follow,' and *subir* 'to rise.' The most common VMMEs that the Spanish NSs used were *caer* 'to fall,' and *escapar* 'to escape.' The low-intermediates used many VMMEs as well, though by far the most common verb was *correr* 'to run' with *caer*, being the second most common. The beginning students were much more prone to using StatLocs such as *estar* en "is on" and *estar debajo de* "is underneath." We now turn to the answers that were found in the more richly contextualized Cloze Task of Motion verbs.

8.2 CLOZE TASK

Looking now at the results from the Cloze Task, of the 28 Motion verbs that the original text Miller et. al (2006) provide, one was eliminated altogether due to the vagueness of its context

and because no Spanish NS provided a Motion verb of any type. What remained were ten instances of VMMEs which was the most common construction. VDPs, one of which was modified with a Manner gerundive, was the second most common construction appearing nine times. Four of each of the VMMIs and the VDLs were also found in the original text. This information will help keep in perspective the answers from the participants of all three groups.

As Table 4 illustrates and as was expected, Spanish NSs followed closely with the verb type found in the original text. VMMEs like *La rana se escapó de la jarra* 'The frog escaped from the jar' were the most common, being used 116 times. VDPs such as *El búho persiguió al niño* 'The owl chased the boy' were used 101 times, though only one of these was modified through the use of a Manner gerundive. VMMIs and VDLs tied at 41 tokens each. Bare PPs were found on six instances and StatLocs twice.

Table 4. Instances of types of Motion Situations in the Cloze Task

	Beginning	*Low-intermediate*	*Native Speakers*	*Original Text*
BarePP	30 (19.1%)	25 (16%)	6 (2%)	—
Engl	2 (1.3%)	27 (17.3%)	—	—
LightV	2 (1.3%)	3 (1.9%)	—	—
StatLoc	23 (14.7%)	12 (7.7%)	2 (.6%)	—
VDL	30 (19.1%)	24 (15.4%)	41 (13.4%)	4 (16%)
VDP	48 (30.6%)	27 (17.3%)	100 (32.6%)	6 (24%)
VDP+	—	—	1 (.3%)	1 (4%)
VMME	19 (12.1%)	29 (18.6%)	116 (37.8%)	10 (40%)
VMMI	3 (1.9%)	9 (5.8%)	41 (13.4%)	4 (16%)
Total Tokens	157	156	307	25

BarePP – No verb; Engl – English VP or PP; LightV – Lexically weak verb; StatLoc – stative locative; VDL – Light Displacement Verb; VDP – Heavy Displacement Verb; VMME – Verb of External Manner of Motion; VMMI – Verb of Internal Manner of Motion

The low-intermediates and beginning participants were not as adept at following the type of verb found in the original, which was as expected as well. Low-intermediates in particular offered 29 instances of VMMEs, like *La rana saltó por la ventana* 'The frog jumped through the window' 27 instances of both English, as in *El niño y el perro fall del precipicio* 'The boy & the dog fell off of the cliff' and VDPs as in *Un búho en el hoyo* 'An owl in the hole.' They used BarePPs 25 times and VDLs 24 times. StatLocs were relatively common, being used a dozen times and VMMIs were used 9 times. Light verbs were the most infrequently used construction at three tokens.

Beginning students favored VDPs, an example of which is *La rana sale la jarra* 'The frog exited the jar' at 48 instances. The BarePPs as in *Por un precipicio* 'Through a cliff' and VDLs like *El perro va a la ventana* 'The dog went out the window' were each the second most

common construction at 30 tokens each. StatLocs were favored on 23 instances and VMMEs were found on 19 occasions. Less common were the VMMIs used three times, and the most infrequent were English and light verb constructions at two instances each.

Table 4 shows that the most common constructions in the original text are the VMMEs, which are *caer* 'to fall,' *saltar* 'to jump,' and *escapar* 'to escape.' The most common VDPs are *salir* 'to exit' and *perseguir* 'to chase.' These same verbs are the most common forms found in the answers by the Spanish NSs as well, though an additional VDP they use not mentioned in the original text is *subir* 'to rise,' which is more common than *perseguir*. VMMEs used by the low-intermediates are also *caer* though they also use *correr* 'to run' quite often. The English phrases are discussed below, though common VDPs are *salir* and *seguir* 'to follow.' Beginning students overwhelmingly preferred the VMME *salir* to any other Motion verb, though the VDL *ir* 'to go' was a close second. BarePPs are thoroughly discussed in section 8.3 below.

In general, there are similar percentages among the results of the Cloze Task and the Picture Description Task. However, there are some major differences within the specifics. And though there are many interesting elements to these data, the most intriguing are those of the BarePP phenomena of the beginning L2 learners in addition to how frequently the low-intermediate L2 learners revert to English which are discussed in detail below. This discussion must begin, however, with some of the broader trends in the data.

8.3 COMPARISON OF TWO TASKS

In order to compare these data it will be useful to consolidate what has been shown up to this point. Table 5 shows the percentage of each category of Motion Situation for purposes of

comparison of the trends that each group follows. The highest percentages in each group are found in bold while the second highest are in italics.

Some of the major differences to be discussed here are immediately evident in Table 5. Specifically, they are the use of BarePPs in the Cloze Task, use of VMMIs, the similarity between the NSs and the original text, and the use of VDLs. Each of these points will be explained in detail.

First, the use of BarePP by the NSs must be explained because this is an ungrammatical structure in most sentences in Spanish. This well-known fact is verified in that Spanish NSs do not use the structure in the Picture Description Task. However, there are 6 instances of them used in the Cloze Task, but it must be mentioned that 4 of these occur in a sentence that is

Table 5. Percentage of tokens per category among activities

	Picture Description Task			Cloze Task			
	Beg	*Low-int*	*NS*	*Beg*	*Low-int*	*NS*	*Text*
BarePP	9 %	5 %	—	*19 %*	16 %	2 %	—
Engl	3 %	20 %	—	1 %	*17 %*	—	—
LightV	3 %	—	—	1 %	2 %	—	—
StatLoc	**40 %**	*22 %*	2 %	15 %	8 %	1 %	—
VDL	*15 %*	14 %	11 %	*19 %*	15 %	13 %	16 %
VDL+	—	—	5 %	—	—	—	—
VDP	*15 %*	13 %	**48 %**	**31 %**	*17 %*	*33 %*	*24 %*
VDP+	—	—	—	—	—	—	4 %
VMME	*15 %*	**26 %**	*34 %*	12 %	**19 %**	**38 %**	**40 %**
VMMI	—	—	—	2 %	6 %	13 %	16 %
Total Tokens	149	128	248	157	156	307	375

BarePP – No verb; Engl – English VP or PP; LightV – Lexically weak verb; StatLoc – stative locative; VDL – Light Displacement Verb; VDP – Heavy Displacement Verb; VMME – Verb of External Manner of Motion; VMMI – Verb of Internal Manner of Motion

contextually weak. The sentence was *El perro todavía molestaba a las abejas,* _____ *y* _____ 'The dog still was bothering the bees, _____ and _____.' On the other hand, most NSs did provide Motion verbs in the same blank. Of equal note is that in all of these blanks, both non-native groups answered either with nouns or did not answer at all, two non-Motion Situations that are not discussed in the results because they are beyond the scope of this thesis. What is most interesting about BarePPs is that in environments where NSs do not use them, L2 learners do, especially the beginners, and this point will be returned to in section 8.5 below.

Another interesting note about the data is that each group uses VMMIs only in the Cloze Task, not the Picture Description Task. No group excessively uses this type of verb in the Cloze Task. However, it is clear that all groups find its use necessary at times, and a good example of this is in the sentence *Los dos* _____ *y miraron detrás del tronco* 'The two _____ and looked behind the trunk' where all groups had at least one member using a VMMI, many choosing *levantarse* 'to arise'. The VMMIs that the Spanish NSs gave outnumbered both of the other groups, with a total of 41 instances. The low-intermediate group used VMMIs nine times, six more than the beginning group.

A third major difference evident in Table 5 is the similarity in the patterning of Spanish NSs to that of the original text. This was an anticipated result, and as such confirms the validity of the test. What Table 5 does not show is that the individual responses are quite variable, even though the verb category is the same. This can be seen in the comparison of a sentence from original text such as *La rana* <u>*se escapó de*</u>[10] *la jarra* 'The frog (CL) escaped from the jar' with the response of a Spanish NS who filled in <u>*se salió de*</u> 'CL exited (from).' Both of the underlined answers are classified as VDPs. This means that these examples show that while many NSs may

[10] The underlined words were the blank that participants were asked to fill in.

not have filled in the exact word; they did use a word that was conceptually related to the word blanked out.

One final interesting point that the consolidation of data seen in Table 5 raises is the uniformity with which all groups used the VDLs. During both tasks, all groups of participants used VDLs between 11 and 19 percent of the time. This point may be beyond the scope of this thesis because there was no explicit hypothesis regarding these, but future research regarding Motion Situations may decide to look specifically at light verbs. This is interesting because it would seem, being that light verbs are some of the first taught and are relatively versatile in English, that due to L1 transfer these would be much more abundant in the non-NS data than Table 5 shows. Particularly with the Cloze Task, the need for a VDL was well contextualized; the relatively similar results may be expected. However, during the comparatively less contextualized Picture Description Task, it would seem easier for L2 learners to recall a light verb for production than a heavy verb. Indeed, this seems to fit in with the data that is discussed below regarding the low-intermediates' use of English.

8.4 ANSWERS TO THE RESEARCH QUESTIONS

Having described the broader patterns found in the data, we now turn to the responses to the research questions posed in section 7.1 above. They are restated here :

1) Have English NSs of beginning L2 Spanish adequately acquired the ability to describe Motion Situations?

Judging by the frequency of specific responses in addition to the number of the categorized responses found among the L2 speakers versus those of the NSs, the beginning students have not

acquired the ability to describe Motion Situations using the conflation pattern of Spanish. The regularity with which these students default to StatLocs shows that they have not acquired at least one aspect of Motion Situations. If they had acquired these properly, the expected tokens of verb types would be similar to those of NSs. However, the disparity between the verb types used by beginners and those of the NSs is large.

1.a) If so, which conflation pattern do they use: that of L1 Spanish, L1 English, or in between?

Though they have acquired the ability to describe Motion Situations with some VMMEs such as *correr* 'to run,' most instances can be attributed to the similarity between the English patterning and the Spanish. This is to say that because English is able to describe such a situation in the same way that Spanish does, participants simply transfer the L1 pattern to the L2. However, there are many more instances where, as discussed in section 4.1 above, participants overgeneralize the L1 patterning to the L2, thereby producing an ungrammatical sentence. This can be seen in the sentence *El perro corre lejos de la colmena* "the dog runs far (away) from the beehive." This instance shows how the L2 Spanish learner may rely on the L1 sentence "The dog runs away from the beehive" to produce what is most naturally said in Spanish as *El perro huye de la colmena* "the dog flees from the beehive."

However, there are also examples in these data where the conflation pattern matches both English and Spanish and no overgeneralization occurs. In the case of the beginners, the Spanish conflation pattern is often correctly used with the verbs *caminar* as in *Caminan a un precipicio* 'They walked to a cliff' and *salir* as in *Salen de la colmena* 'They came out of the hive.' The English conflation pattern is typically employed when the verb *correr* is used as in **Corren de las abejas* 'He ran from the bees,' where the addition of *de* makes the sentence ungrammatical.

Similarly, **Sale su hoyo* 'It exited its hole' is only grammatical when articulated as *Sale de su hoyo* 'It exited from its hole' because *salir* 'to exit' is a VDP. These verb types must be accompanied by a trajectory because "Los VVDD del tipo de *entrar*, *penetrar* y *salir* indican un desplazamiento que implica la superación de un límite espacial" (*the VDs of the* enter*,* penetrate *and* exit *type indicate a displacement that implies transcending a limit in space*; Morimoto, 2001, p. 88). Therefore, it seems that participants can acquire some Motion verbs correctly and others incorrectly, though at the beginning level, this seems closely tied to the conflation pattern of English. Therefore, it is evident from these data that beginning L2 Spanish speakers allow both conflation patterns of English, rather than limiting it to the Spanish convention.

1.b) If not, are there issues that can be attributed to lack of vocabulary?

The findings illustrate that beginning students are able to actually use some Motion verbs, though they are frequently conflated incorrectly. Additionally, it is overwhelmingly evident that they rely heavily on StatLocs. However, these two elements do not necessarily prove a deficiency in vocabulary. In order to fully explore this, the results from the Vocabulary Assessment Task must be considered as well.

At 30.9%, the rate of error that the beginning students had in regards to Motion verbs is remarkable; so much so that their correct answers can be attributed to little more than chance. In fact, their lack of proficiency in Motion verbs accounts for their readiness to revert to the StatLocs which are so prevalent in their data.

It is unclear precisely why during the production no speaker used a VMMI, though as Berman and Slobin (1994) suggest, this may be an issue of "the cultural specificity of our task" (p. 21). This is to say that it uses American and possibly culturally specific pictorial references. It is possible that the Spanish NSs do not describe any internal Manner of Motion because they do

not perceive it from the pictures. But being that all L2 Spanish participants were American, this analysis does not hold true for them. However, looking back at Table 3 reminds us that VMMIs are relatively infrequent in the Spanish NSs' picture descriptions, a task quite similar to many recurrent classroom activities. Therefore, it is likely that L2 students do not have robust enough input to acquire these items for productive use in Picture Description Tasks. And though VMMIs are as prevalent as VDLs are, English NSs get these because of their frequency in their L1 and because they apply to many more classroom situations than VMMIs do. Therefore, this may be a vocabulary issue that L2 speakers, which is especially noticeable when comparing the beginners (2%) with the low-intermediates (6%) who do slightly better, with the NSs (13%) who use these natively.

2) How do the results compare to those of low-intermediate Spanish L2 learners? How do they compare to Spanish NSs?

To respond to this question, we return to the results of the Vocabulary Assessment Task. The low-intermediates erred on only 4.3% of the Motion verbs in that task, which shows that these participants are able to recognize receptively most Motion verbs. However, they are not able to correctly use these same forms during production tasks. Therefore, it is important to review the reasons why students may have trouble producing some forms while at the same time being able to receptively know their meaning.

The production tasks where conflation patterning was the main focus showed unexpected results. This is because an overwhelming number of the responses by participants were made in English. What is most curious about this tendency is how well they did on the Vocabulary Assessment Task. For instance, one participant who was properly able to match *caer* with its English equivalent, 'to fall,' was unable to say *El perro cayó de la ventana* 'The dog fell out of

the window.' Instead, at the moment of production, she said *El perro fell from la ventana*. This same participant was unable to fill in the blank of the Cloze Task as the Spanish NSs did, with *caerse* 'to fall,' instead filling in 'falls from.' If this were the only occurrence, it would be simpler to analyze the matching Vocabulary Assessment Task as a correct guess. However, there are similar occurrences and many participants that resorted to English even when they were able to recognize the Spanish form correctly.

Though other words are also forgotten (see page 59) *caer* is the most frequent of these because 'to fall' is the most commonly used English word, though some participants are able to use this correctly. Therefore, it deserves its own analysis. It is important to note that *caer* is also a constituent in a chunk that L2 Spanish learners at the University of Pittsburgh are exposed to in Castells, Guzmán, Lapuerta, and García (2006) in their first semester. The expression that is taught is *caer bien*, which means 'to be likable'—though a word for word translation is 'to fall good.' Since most students may not have used this Motion verb *caer* since their second semester, partially because there are few communicative activities in which the Motion verb can be meaningfully practiced in the classroom, they only have productive recall to the word as it appears in the chunk. However, at the moment of seeing the word in writing, they are able to receptively recall that the word from the marked translated phrase does indeed mean 'to fall.'

Kellerman (1979) calls this phenomenon U-shaped behavior. Dealing mainly with Dutch, English, and German L2 acquisition, Kellerman (1979) was the first researcher to report such dramatic U-shaped behavior. He shows that L2 students can initially recognize some grammatical forms in their L2 correctly, though at a later point they cannot. Longitudinally studying three separate cases, he looks at transitivity alternations, hypothetical phrases, and idiomatic expressions. In all three studies, L2 students initially acquire the form in question

correctly. Likely causes of this can be attributed either to some form of chunking or, because of the similarities between the languages in question, students are able to produce "a number of nontargetlike structures, but also a number of targetlike ones" (p. 350). Over time, however, the students replace these correct forms with ungrammatical ones. After a short period of producing these incorrect forms, students are able to repair their errors and once again use the forms grammatically. Therefore, what is seen in the low-intermediate students in the current study is in line with Kellerman's (1979) findings.

Kellerman's (1979) analysis, unlike the chunking analysis of *caer* above, can account for the low-intermediates' use of other manner verbs as well. Of particular interest at this point is *saltar 'to* jump,' which is not a part of any chunk that L2 students learn in class. Similar to other VMMI verbs such as *volar* 'to fly,' *saltar* is not used by one participant in the recording or the Cloze Task, though again the word is correctly matched in the vocabulary test. Instead, during the production tasks, the participant fills in the blank (bolded) with the following: *La rana* ***jumped out*** *la ventana*. 'The frog jumped out of the window.' There are several interesting points that must be made about this utterance.

First, it is again possible that this speaker is able to recognize only the written form. However, it is more plausible that this speaker actually does know this word but is uncertain of its specific syntactic environment. It is worth mentioning that the speaker also correctly identified the Motion verb *salir* 'to exit,' which is the verb that most Spanish NSs used to fill in the same blank. However, since this speaker chose not to use either of these words, the reason must lie beyond lexical differences. The reason why the participant did not use the Spanish verb *salir* is because it cannot effectively communicate the Motion of jumping, which, because the participant says the word in English, is obviously the idea that they want to convey. Here it is

important to note that the majority of those answers that were not English were constructions with *salir*.

Briefly returning to the point raised above regarding the universal use of VDLs, this fits the description here. In the sense that the L2 Spanish speakers are reverting to light verbs as often as the Spanish NSs, it would seem that these speakers know that a light verb does not carry enough lexical information to express what they need to express.

This and other low-intermediate participants never use the VMMI *saltar* 'to jump' in this construction, though one speaker uses the word correctly to describe a different scene. Therefore, it is likely that these speakers know that *saltar por* 'to jump through' is ungrammatical in this particular blank. However, this line of argumentation would be more compelling if the speakers who followed this pattern would have used either verb in the actual production, though they did not. It therefore remains to be seen whether or not they actually know the words on a productive level, and simply because it does not express the precise meaning that they want, they do not use it.

8.5 GENERAL DISCUSSION

The data shown in this thesis support a general hypothesis that there is an order in which L2 Spanish is acquired by English NSs. In particular, the order begins with frequent use of StatLocs and BarePPs. As students progress in the L2, they begin to doubt their use of StatLocs and increase their use of VMMEs (e.g. *Corrió hacia un precipicio*. " (It) ran towards a cliff."), producing more native-like sentences in this regard. However, in terms of VDPs (e.g. *La rana sale de la jarra*. " The frog exits (from) the jar."), beginning students are more closely aligned

with NSs than low-intermediates. This means in terms of progression towards a more native-like L2 that there is a U-shaped behavior which governs the acquisition of VDPs. Use of English in sentences follows this same pattern, with incorrect use increasing temporarily. However, BarePPs, LightVs, StatLocs, VDLs, VDPs, VMMEs, and VMMIs all follow the expected progression towards a more native-like use.

Another observation that this thesis has been able to discover is the use of BarePPs by beginning L2 learners. These utterances are interesting because of what seems to be the lack of a verb. In almost all of the cases where this occurs in the present study, the missing verb would be a Motion verb, such as *Las abejas de la colmena* 'The bees from the hive' (missing *salen* 'to exit'). This is based on the fact that the picture presents a situation that is most adequately described through a Motion verb, and the Spanish NSs used such verbs. Sometimes the Motion is evident only through the sequential viewing of the pictures, whereas in other pictures such as that of Appendix A below, it is quite obvious that the frog is escaping from the jar; not simply that the frog is on top of the jar. As a result, none of the Spanish NS participants ever mentioned these StatLoc scene descriptions. Furthermore, in the data from English NSs that Berman and Slobin (1994) present, none of the English NSs, aged 3 to adult, do so either. It is therefore highly likely that these participants were in fact noticing the Motion Situation present in the picture, though they felt unable to adequately describe it.

One possible solution is that instead of using a verb conflated with Motion, because they are only able to produce a few, they use a StatLoc. This is because verbs such as *estar*, the locative 'to be' is taught within two weeks of their first class in the pre-beginning, introductory

class. Every participant used *estar*[11] in each of the production tasks, which means that they know how to say 'to be' in Spanish. The mystery then lies in the reason why they do not use this verb in this sentence found several times in the data:

(22) *El niño sobre de el pedrusco.*
the boy on top of the boulder
"The boy (climbed up) on the boulder."

There are at least two common ways that this idea could be pronounced by a NS: *Subió el pedrusco*, 'He climbed up on the boulder' or *Está sobre el pedrusco* 'He is on top of the boulder.' In the context of the previous picture, the former is the most commonly used L1 Spanish rule. This is because the boy is at the base of the rock in the previous picture, whereas in the following picture he is on top of the rock. Relating the two pictures in the past tense, as the participants were asked to do, attention must be paid to the novelty of the boy being on top of the rock. As shown above, beginning students have few if any Motion verbs in their lexicon, which means that they likely are not familiar with the verb *subir* 'to rise.' Failing this, then, a possible L1 Spanish sentence would be the resultant state created by the addition of *ahora* 'now,' as in *Ahora el niño está en el pedrusco*, "Now, the boy is on top of the rock." However, no Spanish NSs did so in this study, focusing their attention instead on the past ascension of the boy with *subir* and not the present StatLoc expressed by *estar*. Since none of the L2 speakers acknowledge the novelty of the new location with the addition of this temporal adverb, it is likely that they mean something other than the simple resultant state of the boy.

[11] It is well known that L1 English speakers of L2 Spanish very frequently confuse the assignment of a locative by *estar* with the copula *ser*, as in **La rana es en la jarra.* "The frog is (copula) on the jar." This type of error is ignored in this thesis, and therefore, any instance of *ser* being attributed incorrectly with an ability to assign a locative function is still considered to be a locative.

The most likely solution to this is that in fact they are using a compensation strategy for their lack of vocabulary that is described by both Dörnyei and Kormos (1998) and Van Riemsdijk (2002), the complete omission of a word, a null light verb. In order to show this is indeed what the L2 speakers are doing in the current study, we return to the concept of L1 transfer.

In English as in Spanish, a sentence such as that shown in (22) without a verb but simply a BarePP is ungrammatical, though an alternate possibility is to use a light verb such as 'got.' This is shown in Berman and Slobin (1994) by the example *The boy got up onto the rock*. Furthermore, by stating that light verbs are governed by a "low-level parameter which can be set differently in different contexts within the same grammar" (p. 189), Van Riemsdijk (2002) shows how a sentence like *The boy up onto the rock* could be a possible transferable construction. If this analogy is to be extended to L2 Spanish, English NSs quite possibly may say something like *El niño sobre de el pedrusco*, which is precisely the sentence heard in (22) of the current study, though there are many variations on this exact syntactic structure. Since this is the context that is found in the Spanish version, it is evident that these L2 Spanish speakers are indeed producing a phonologically zero light verb.

In fact, this finding is an important piece of the bigger picture of the study. One of the hypotheses was that the beginning students would be able to be classified according to vocabulary level. However, there was a relatively uniform stratification of vocabulary levels with no line clear enough to determine two separate groups. Therefore, since all participants had similar vocabularies, they were treated as a single group. However, instead of stating that the hypothesis was proven false, it is important to recognize that the hypothesis itself did not account for the fact that a BarePP should itself have been categorized as a light verb construction. This

classification would not have changed the course of the study, but may have streamlined the hypothesis. On the other hand, the number of null light verbs was unpredicted; therefore, future research on beginning L2 students of Spanish with English as their L1 should anticipate this and properly adjust their hypotheses.

Furthermore, continued research on beginning L2 Spanish should also look at the difference between a natural language setting and a classroom setting. This was beyond the scope of the current investigation, though it would be interesting to discover whether the null light verb phenomenon afflicts those L2 learners who live in a foreign country as compared with those who learn Spanish at a university. A similar question could be asked of the use of English by low-intermediate students learning Spanish in an environment where Spanish is spoken versus those of American university students. It is likely that such studies would find that both of these phenomena are much less common among L2 learners in a natural setting. This assumption is based on the amount of positive input that would likely shy learners away from their use of English and null light verbs.

The results of the current study show that participants from both levels of non-native Spanish offered more tokens in the Cloze Task portion of the study than they did in the Picture Description Task. This is because of the rich context that was provided by the Spanish language version of *Frog, Where Are You?*. Therefore, as a suggestion for further research on any topic is that the tasks participants perform be fully contextualized. Particularly studies of classroom learners of the communicative method, who are implicitly taught to search for the context of specific in-class activities. This expectation on the part of the participants could be exploited to the benefit of the research, as well as the participants in that it helps to know the context. This contextualization of tasks could be employed during many forms of research including

grammaticality judgments and phonological studies. Simply by making each test item in some way relevant to the last, by creating a story out of the grammaticality judgment items for example, participants are much more likely to forget that they are being tested and offer a greater number of tokens.

9.0 CONCLUSION

One caveat about the generalizability of these results is that all of the participants were students at the University of Pittsburgh. Every L2 Spanish student began their language learning at this University, which means that all students used the same text book. It will be useful to briefly review the textbook with which these students began their language learning. Though the low-intermediate students have graduated to a different book, they each spent at least two semesters with Castells et al. (2006).

Castells et al. (2006) is divided into 15 chapters, each of which focuses on one fully contextualized topic. The first half, which is used in the first semester of Spanish at the University of Pittsburgh, deals mainly with specific vocabulary items and some grammar points. Vocabulary topics include student life, food, family, the home, and clothing. These topics are coupled by the introduction of basic grammar points such as pronouns, placement of adjectives, placement of complement pronouns, present progressive, and preterit. Each chapter also has a running theme of a single country as an introduction to cultural information. Additionally, the final pages of each chapter explicitly separate the four skills into eight distinct activities: two listening activities, two reading activities, two conversations, and two writing activities. VMMI verbs, such as *bailar* 'to dance,' and some VMME verbs, as *caminar* 'to walk,' are the first Manner of Motion verbs presented. There is no mention that the VMMI verbs follow a different pattern than their English counterparts. Therefore, since both types are presented together, there

is no reason for students to believe that the conflation pattern is any different from that of English. In fact, Castells et al. (2006) never make explicit that constructions such as **Bailamos al escenario.* 'We danced to the stage' are ungrammatical in Spanish, though not so in English. This lack of thoroughness on the part of textbook writers leaves students feeling that the language cannot describe precisely what they would like to say. However, just because these students have not acquired the L1 conflation pattern of Motion, Manner, and Path in their L2 does not mean that they are incapable of acquiring it. It might very well be possible, though new teaching methods and textbooks must be devised and their effectiveness established through empirical evidence.

One student mentioned after he completed the study that he had been frustrated during the recording because he couldn't think of the right words to describe the events that had taken place in the pictures. He said that he often feels the same frustration in class speaking with his teacher, who is a Spanish NS. He felt that the teacher, during recasts, would elicit from him a sentence that wasn't exactly what he wanted to say. For instance, he might say something like *Nadamos muy lejos a traves del río* meaning "We swam all the way across the river," but instead of picking up on the fact that the river is wide, as the English version mentions, the teacher recasts the sentence in its most natural Spanish form *Cruzamos el río nadando* "We crossed the river (while) swimming." Unfortunately for the student, this recast is not as precise as he wants it to be, leaving off the "all the way," though it is an accurate representation of the most natural way to say the sentence in Spanish. However, because the Spanish version does not necessarily need the information, the student thinks that his teacher understands only the premise of his statement, but not the level of detail he wants to convey.

His feeling is right in line with the findings of this study. It is evident from these results that the majority of the participants did not have sufficient training in Spanish to fully describe the Motion Situations evident in the picture. Rather, pieces of it were alluded to on many occasions, as is exemplified by *Las abejas van para el perro* 'The bees go to the dog' where the clear intention was to use the Spanish word for 'to chase.' It was also clear through extra-linguistic cues not reported here such as sighs and grunts that some participants, both beginning and low-intermediate, found the task quite difficult. This was not simply because of a lack of vocabulary because they could identify the proper translation of the word; they just could not produce it in context.

The combination of the individual elements of this thesis, the theory, the previous studies, and the results of the current study, points to the need for further research in the area of second language acquisition. Most specifically, the goal of further research should be to study beginning L2 learning students in a bi-directional fashion. A finding of similar results on a larger scale with students from many universities may help uncover some mysteries about the way humans learn a subset second language. Once we understand more about the way we learn, textbooks such as Castells et al. (2006) will have the resources to create more productive language teaching materials.

What I have seen throughout the course of this study is that students want to learn a new way of "thinking for speaking" and indeed seem to have the beginnings of it. As they are telling their version of the story, if they do not have a sufficient level of vocabulary to tell the story in their L2, they will revert to a description of the scenery. They use this technique of vocabulary circumlocution because their training in their L2 has indeed led them to a new way of "thinking

for speaking:" pay attention to the details that you can describe in Spanish regardless of how relevant they are in the task.

APPENDIX A

PICTURE DESCRIPTION TASK

INSTRUCTIONS

Once you begin recording, the pictures you just saw will appear one by one, this time with some things labeled. When the first picture appears, begin speaking in Spanish taking as much time as you need. The recording should be a narration that describes each picture as if these events happened in the past. Please try to only describe the relationships between what is labeled in as few sentences as possible. When you are finished describing each picture, **double-click** "continue" to go to the next screen.

A.1 SCREEN SHOT

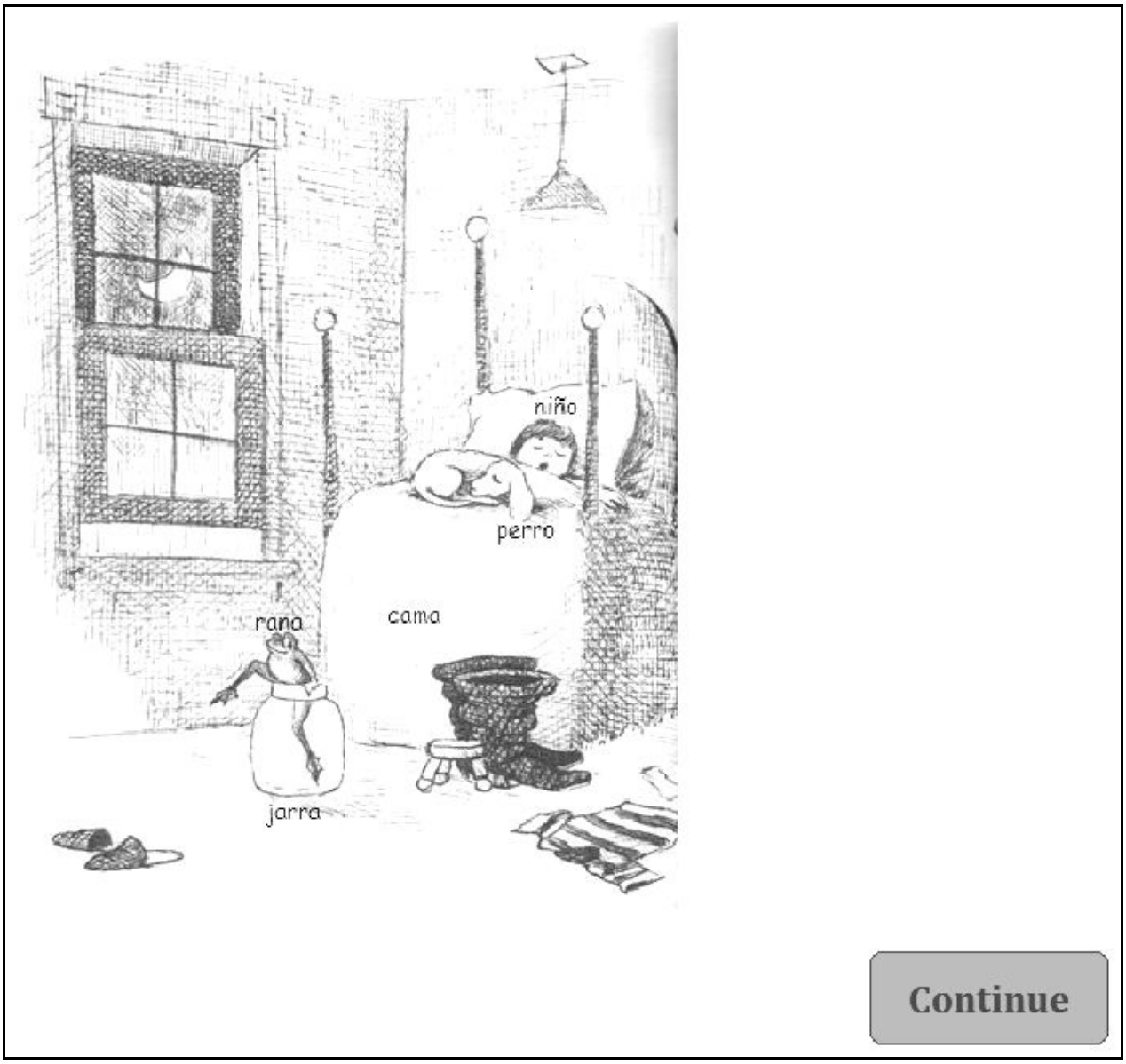

Figure 1. Sample Revolution page of a scene from *Frog, Where Are You?*.

APPENDIX B

CLOZE TASK

B.1 INSTRUCTIONS.

On the following screens is a Spanish version of "Frog, Where Are You?" Fill in the blanks with the best words according to context; each blank may represent 1-3 words. Even if you are unsure of the correct word(s), please try your best to fill all blanks. Do not worry about spelling or accents, but please add prefixes to any *-l* that should be either *el*, *al*, or *del*.

B.2 CLOZE TASK EXAMPLES.

1. Había un niño que tenía un perro y una rana. La rana estaba en una jarra grande en el cuarto del niño.
2. Una noche cuando el niño y su perro estaban durmiendo, la rana _____ la jarra. La rana _____ la ventana.
3. Cuando el niño y el perro se despertaron, vieron que la jarra estaba vacía.
4. El niño buscó en todas partes a la rana. El perro buscó también. Cuando el perro trató de buscar dentro de la jarra, no pudo _____ su cabeza.
5. El niño llamó desde la ventana que estaba abierta, «Rana, ¿Dónde estás?» El perro _____ la ventana con la jarra todavía en la cabeza.

APPENDIX C

VOCABULARY ASSESSMENT TASK

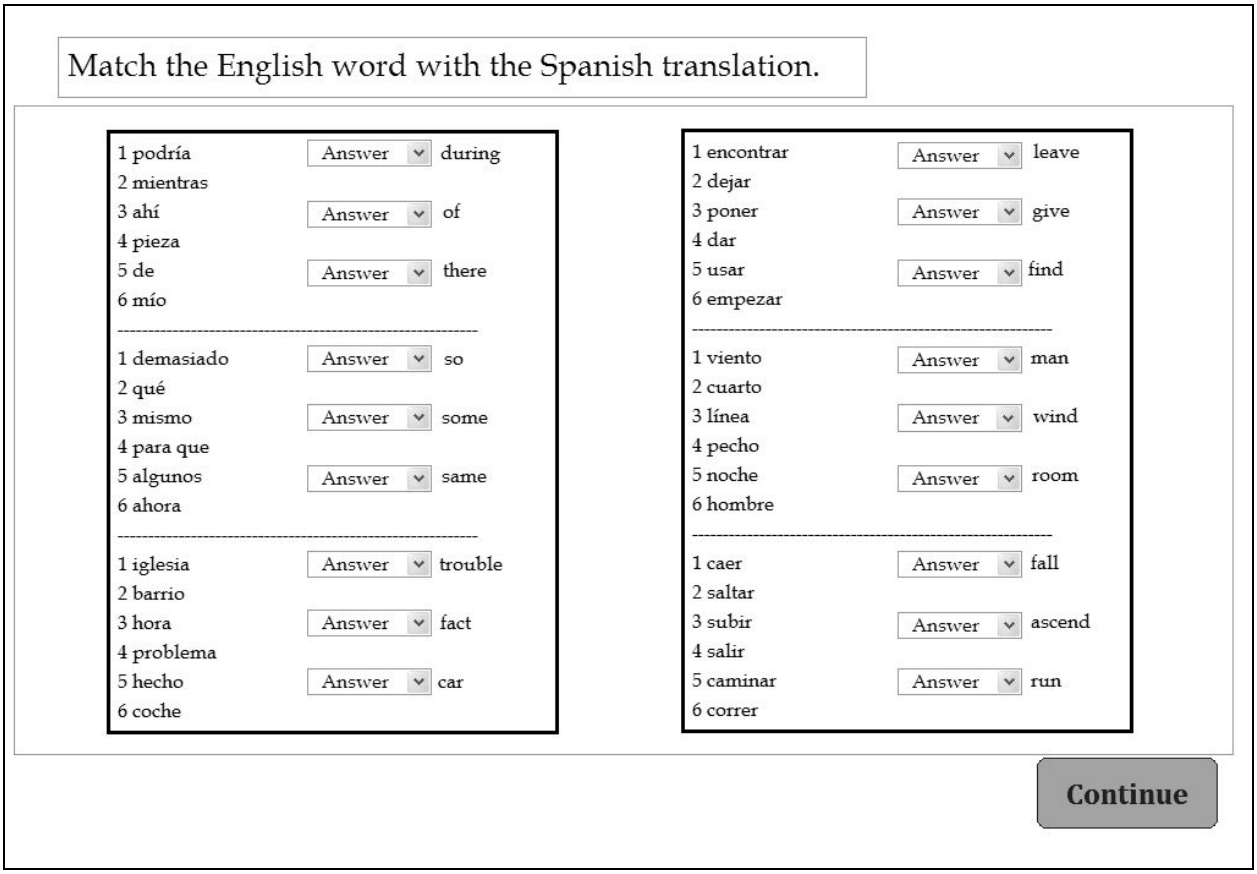

Figure 2. Sample Revolution page of the Vocabulary Assessment Task.

APPENDIX D

EXAMPLES OF COMMON SENTENCES PRODUCED

D.1 PICTURE DESCRIPTION TASK

Spanish NSs

48% VDPs — *La rana se salió de la jarra* 'The frog exited the jar'

34% VMMEs — *La colmena se cayó del árbol* 'The beehive fell out of the tree'

Low-intermediates

26% VMMEs — *Las abejas corren después del perro* 'The bees ran after the dog'

22% StatLocs — *Búho estuvo en el árbol* 'An owl was inside the tree'

Beginners

40% StatLocs — *El perro está debajo de la ventana* 'The dog is beneath the window'

15% VDLs — *El perro va a la tierra* 'The dog went to the ground'

17% English — *El niño y el perro fall del precipicio* 'The boy & the dog fell off of the cliff'

D.2 CLOZE TASK

Original text

40% VMMEs — *La rana se escapó de la jarra* 'The frog escaped from the jar'

24% VDPs — *El búho persiguió al niño* 'The owl chased the boy'

Spanish NSs

38% VMMEs — *La rana saltó por la ventana* 'The frog jumped through the window'

33% VDPs — *El niño se subió al pedrusco* 'The boy got up on the boulder'

Low-intermediates

19% VMMEs — *La rana corriendo afuera de la ventana* 'The frog ran outside (through) the window'

16% BarePP — *Un búho en el hoyo* 'An owl in the hole'

Beginners

31% VDP — *La rana sale la jarra* 'The frog exited the jar'

19% VDL — *El perro va a la ventana* 'The dog went out the window'

19% BarePPs — *Por un precipicio* 'Through a cliff'

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