

Direct Object Marking and Word Order Processing in Spanish: An Unclear Connection

Jason Killam

Indiana University of Pennsylvania

1. Introduction

An overlooked aspect of word order processing studies in Spanish (e.g., Glisan, 1985; LoCoco, 1987; VanPatten, 1984) concerns its relationship with object marking, often termed the “personal *a*” rule. This is not to say that object marking is not mentioned in these studies. It is discussed, assumptions are made about its perceived relevance in attenuating the attachment of agent/subject to the first noun, and then other linguistic and extralinguistic factors take the forefront in the investigation. The purpose of the present investigation is to explore object marking and discuss its relevance to both processing studies in Spanish and in other languages.

Cross-linguistically, word order processing plays a more prominent role in acquisition than direct object marking. The reason is simple: it has been shown that despite differences or similarities in the syntax of the L1 and the L2, learners attach agentive status to the first noun. Thus, the acquisition of word order affects all languages, while object marking only affects a smaller subset of the world’s languages. For example, even though passive constructions are found in English, English learners of French will attach agentive status to the first noun of a passive construction (Ervin-Tripp, 1974). In *Marie est admiré par Pierre* ‘Marie is admired by Pierre’, learners perceive ‘Marie admires/admired Pierre’, turning the patient, Marie, into the agent. In neither of these languages does object marking play a role. Thus, an understanding of object marking is not necessary, cross-linguistically speaking, to study the acquisition of word order. Even so, it has been assumed that direct object marking in Spanish should influence, or attenuate, the attachment of agentive status to the first noun.

To understand this better, a brief description of direct object marking is necessary. Some direct objects in Spanish are marked with the accusative marker *a* (that can also act as a preposition in other constructions). In the sentence, *Juan vio a María* ‘John saw Mary’, the particle *a* serves to mark that *María* is the direct object. While SVO structure is found regularly in Spanish, other syntactic options are available. In an OVS construction, *A María la vio Juan*, the particle *a* moves to the initial position with *María* (and the doubled direct object clitic *la* ‘her’ is also included), but the meaning remains the same: ‘John saw Mary’. This type of OVS construction has been used as stimuli in a number of studies. For example, VanPatten (1984) makes mention of the fact that the addition of the object marker *a* in two of the examples does not help the learners attenuate the use of what he later calls the First Noun Principle (VanPatten, 1996, 2004). In the last decade, a number of studies have shown that the acquisition of direct object marking is difficult in its own right (Guijarro-Fuentes & Marinis, 2007, 2009; Montrul, 2004) and lend support to VanPatten’s (1984) explanation that learners cannot recall the rule quickly enough during this online aural task. This explanation seems reasonable, but the current study shows that there is more to the “personal *a*” rule than previously understood.

2. Previous Literature

There are various areas of research that need to be addressed to guide the current investigation. The first of these that will be addressed relates to the acquisition of grammatical features in the second language. This involves a discussion of types of knowledge and how forms are incorporated into a developing system. The second subsection describes several of the alternative syntactic constructions

* I would like to thank two anonymous reviewers for their feedback and insightful comments. Any remaining errors are my own.

in Spanish other than SVO order and a review of the literature related to the acquisition of word order and the attenuation of the First Noun Principle. The third section reviews the syntactic literature related to, and the acquisition of, direct object marking. The research question that guides the remainder of the study is provided at the end of this section.

2.1. The Acquisition Process

VanPatten's (1984) explanation that learners are not able to recall the "personal *a*" rule during a real-time aural task at a novice level of acquisition motivates the current section. This implies two things. First, they may know some rule that states that you should mark specific animate direct objects in Spanish. Second, they do not have time to process said rule in the five seconds provided before moving to the next sentence. Another term for a learned rule such as this is declarative knowledge. Learners at this level have not acquired the procedural knowledge needed to 'do something in real time' as suggested by Schmidt (1992:359).

Schmidt (1990) describes the beginning of this process as intake. Of the input a learner receives, it is only that input that is noticed which becomes intake. Intake serves to inform the developing system. In order for this to happen, learners attempt to use the forms, and this leads to a restructuring of the system. It is not bits of data that are accumulated, but as VanPatten (1993) states, the form accommodates to the interlanguage system. Thus, only noticing a feature does not mean that the linguistic system will develop. The form needs to fit in. It may require that the system changes in some way. As learners incorporate the form through practice, its use emerges.

If this is the case, does noticing the form in a specific syntactic construction, such as SVO, mean that it will later emerge only in that same type of syntactic construction, or does it emerge in other syntactic structures (e.g. OVS) when it serves the same grammatical function? For example, does the learner need to notice direct object marking in an SVO structure to begin to incorporate marking in other SVO structures? Does the same learner need to notice direct object marking in OVS structures to inform the developing system that object marking takes place in OVS structures? Or, do learners acquire procedural knowledge that is similar to the "personal *a*" rule that requires the marking of human animate direct objects, period?

2.2. Word Order Studies

In the example provided in the introduction, either Marie or Pierre was capable of performing the action. This misinterpretation does not happen when agentive status can only be applied to one of the two nouns in the sentence. If the sentence is changed from 'Marie is admired by Pierre' to 'The building is admired by Pierre', learners do not attach agentive status to the building and do not incorrectly derive 'The building admires Pierre'. This led Bever (1970) to postulate an NVN processing strategy where the first N=agent and the second N=object when both nouns can act as agents. This processing strategy was replicated among adult learners of English (Nam, 1975), German (LoCoco, 1987), and Spanish (LoCoco, 1987; VanPatten, 1984). These studies led to an interest in determining what linguistic and extralinguistic factors might help learners attenuate the NVN strategy (Houston, 1997; Lee, 1987; Lee & Malovrh, 2009; Malovrh, 2006; VanPatten & Houston, 1998) as well as the effectiveness of different pedagogical strategies in changing the developing system (VanPatten & Cadierno, 1993). While the focus of these studies was not specifically geared towards the attenuating properties of the object marker *a*, a number of these studies include *a* in their examples (Barcroft & VanPatten, 1997; Houston, 1997; Sanz, 1997; VanPatten & Houston, 1998). These studies demonstrate, in a consistent manner, that learners generally lack the ability to recognize OVS word order, even with the addition of overt marking of the direct object.

2.3. Accusative Object Marking Studies

The syntactic literature suggests that direct object marking in Spanish is hardly a cut and dry concept. LoCoco (1987) points out that *a* can be used whenever the speaker desires to disambiguate the subject and object. This includes animate and inanimate objects. The elicitation tasks in the current study control the use to human objects, but this does not guarantee the requirement that all direct objects will be marked. This has been pointed out in numerous articles such as those by Aissen (2003),

Leonetti (2004), and Torrego (1998). They find that specific human direct objects should be obligatorily marked and non-specific human direct objects unmarked.

Just as the word order studies mentioned above demonstrate that learners are slow to incorporate alternative word order structures into their developing system, the same has been found for accusative object marking in Spanish. Guijarro-Fuentes & Marinis (2007) show that advanced learners with English as their L1 still differ significantly from native speakers on even the least semantically complex of the sentence types tested. The difficulty of the acquisition of accusative object marking was found to be true of L1 Catalan speakers learning Spanish as well (Guijarro-Fuentes & Marinis, 2009).

2.4. Research Question

Do learners acquire an object marking rule, implying a relationship between the use of object marking in canonical SVO structures and the ability to correctly interpret OVS sentences that include object marking? A number of early studies (Glisan, 1985; LoCoco, 1987; VanPatten, 1984) signal the inability of learners to use object marking as a cue to interpret OVS sentences. In LoCoco's words, the learners do not "listen for the prepositions" (LoCoco 1987:126). In VanPatten (1984:64), it is suggested that the learners "cannot come up with the rule in time" even if they know the rule. It is being argued by these authors that if learners know something about the object marking rule, they would perform better on the word order tasks.

3. Methodology

The participants in the current study consist of 102 English-speaking learners of Spanish from four levels, all studying at the same large Midwestern university. These 102 participants were those that completed a background questionnaire, 20 item proficiency test, and met the following criteria: (1) all participants use English as their first language and that this was also true of both parents and (2) proficiency test scores fell within two standard deviation points of the mean of other participants at the same course level. The final groups included 28 participants from a second year undergraduate course, 28 participants from a third year undergraduate course, 22 participants from a fourth year undergraduate course, and 24 participants in graduate studies. Another group (n = 22) served as a native speaker control group. These participants completed the same tasks as the non-native speakers.

After the background questionnaire and the proficiency test, each participant completed three tasks. The first task, an oral task, tested learner use of object marking in SVO sentences. This task required the use of a computer with headphones, a microphone, and access to PowerPoint and recording software. All second and third year participants completed all tasks in a language laboratory. Fourth year undergraduates, graduate students, and native speakers completed the tasks individually with the investigator, using a laptop with the same setup. For the first task, participants viewed PowerPoint slides and recorded their voices simultaneously. The first slide consisted of a picture with text boxes to provide information needed, such as the names of people. For example, in one picture, a girl named Pilar finds another girl who is wearing a yellow skirt hiding behind a tree. After 5 seconds, a new slide appears with a question:

*¿Quién fue encontrado por Pilar, || 'Who was found by Pilar,'**
*una mujer que llevaba una falda blanca o || 'a woman who was wearing a white skirt or'**
*una mujer que llevaba una falda amarilla? || 'a woman who was wearing a yellow skirt?'**

Pilar encontró _____. || 'Pilar found _____.'*

*To be clear, the English glosses were not a part of the task.

A passive construction was used in the question to avoid the possibility of priming as the passive form does not require the accusative marker *a*. Participants were then told to respond using the answer prompt. Once the slide with the question was seen, participants had ten seconds to respond. Notice that in the answer prompt, the order is manipulated to SVO to provide the proper context for object marking. The purpose of the task design was to draw attention to meaning (answering the question correctly) and away from form (accusative marking). There were 25 questions in this task, five of

which were distractors and 20 of which contained human direct objects. These were distributed among (1) four items per each of five levels of definiteness based on Aiseen (2003), (2) 10 singular and 10 plural objects, and (3) 10 high transitive verbs (object was physically affected by action) and 10 low transitive verbs (object was not physically affected by action). It is worth mentioning that four of the 20 objects should not be marked (Aissen, 2003; Torrego, 1998) as they were non-specific indefinites.

The second task was a contextualized written task that contained 38 items, 20 of which dealt with the accusative *a*. The other 18 items were used as distractors and consisted of other preposition use. The current study does not consider the results of this task, as it served a different purpose. What is important to note from this task is that it asks participants to consider the use of *a*. The attention of the learner has been drawn directly to the preposition prior to the third task.

The third task utilizes the instrument found in VanPatten (1984) as its model, but contains different drawings and input sentences. Participants heard a sentence and had to choose from four pictures. These four pictures were essentially two pairs with the subject and object reversed. For example, the first drawing showed two boys who find two girls in an armoire, while the second drawing shows two girls who find two boys in the armoire. The third drawing shows two boys who find two girls under a bed, and the fourth drawing shows two girls who find two boys under the bed. 14 sentences were read, eight of which contained OVS word order. The other six were SVO order and used as distractors. The eight OVS sentences were controlled so that two sentences contained singular subjects and singular objects, two contained plural subjects and plural objects, two contained singular subjects and plural objects, and two contained plural subjects and singular objects.

4. Results

The results of the speaking task indicate that learners at all levels produce some marking, with the percentage of marking increasing the higher the proficiency level (See Table 1). On this task, level 1 (2nd year) participants marked 7 of 555 (1.3%) human objects. Marking increased more than 10% among Level 2 (3rd year) participants, who marked 74 of 555 (13.4%) human objects. This trend continued at Level 3 (4th year) participants marked 113 of 438 (25.8%) human objects. Finally, level 4 (graduate students) participants marked 317 of 478 (66.3%) human objects, an increase of more than 40% over Level 3. The native speaker group marked 322 of 438 (73.5%) of the human objects. Recall that 20% of the human objects were non-specific indefinites, so an 80% marking rate would have been considered accurate according to the literature.

Table 1

<i>Frequency of Use of 'a' on Oral Task (Task 1)</i>			
<u>Level</u>	<u>Use of 'a'</u>	<u>Total</u>	<u>%</u>
1 (2nd year)	7	555	1.3%
2 (3rd year)	74	555	13.4%
3 (4th year)	113	438	25.8%
4 (Graduate students)	317	478	66.3%
NS	322	438	73.5%

The results of the third task, the OVS listening task, indicate that the success rate was higher than on the first task. Level 1 participants interpreted 23 of 224 (10.3%) OVS sentences correctly. Level 2 correctly selected 51 of 224 (22.8%) OVS sentences. Level 3 demonstrated an accuracy rate of 94 of 176 (53.4%). Continuing same trend of improvement over lower levels, Level 4 participants achieved an accuracy rate of 172 of 192 (90%). The native speaker control group interpreted 300 of 308 (97.4%) OVS sentences correctly.

The results from the native speakers confirm that the tasks produce the expected results. However, because the direct object marking rate of 73.5% on task one 6.5% lower than the predicted 80% based on the literature, marking does not follow the binary specific/non-specific rule. Despite this, native speakers marked 100% of the human direct objects when they were proper names. Thus, out of 88 items with proper names, such as *Miguel* in *Juan golpeó a Miguel* 'Juan hit Miguel', native speakers never once omitted the marker. This confirms the validity of the task: Participants were able to read a

passive voice question related to the picture and respond in the active voice. As for task 3, native speakers marked 97.4% of the OVS sentences correctly.

5. Discussion

Of most importance to the current study is the combination of the oral and listening tasks to answer the research question: Is there a relationship between use of object marking in canonical SVO structures and the ability to correctly interpret OVS word order? This requires an individual analysis of participants. Considering each participant, we first need to know if *a* was produced on the oral task. If a participant marks even one object, it is evidence that the form is emerging in their developing system. Next, did the participant answer any of the OVS sentences correctly? If so, this is evidence that the learner is in the process of acquiring OVS order. Thus, we end up with four possibilities: (Group 1) marking on oral task (using *a*) plus at least one correct interpretation of OVS sentences on the listening task, (Group 2) marking on oral task plus incorrect interpretation of all OVS sentences on task 3, (Group 3) complete non-use of marking on the oral task plus at least one correct interpretation of OVS sentences on the listening task, and (Group 4) complete non-use of marking on the oral task and incorrect interpretation of all OVS sentences on the listening task. Table 2 provides the breakdown of each of the four possibilities by level.

Table 2

Comparison of Use of 'a' on Oral Task and Correct Selection of OVS Sentences on Listening Task

	Group 1: 'a' use plus at least one	Group 2: 'a' use plus all incorrect	Group 3: 'a' Non-use plus at least one	Group 4: 'a' Non-use plus all incorrect	
<u>Level</u>	<u>correct (OVS)</u>	<u>(OVS)</u>	<u>correct (OVS)</u>	<u>(OVS)</u>	<u>Total</u>
Level 1	0	4	12	12	28
Level 2	6	7	8	7	28
Level 3	12	3	4	3	22
Level 4	22	0	2	0	24
Total	40	14	26	22	102

Referring to Table 2, Group 1 and Group 4 are the least controversial. The first group would appear to represent a group that is using a “personal a” rule to both mark direct objects and to recognize the marked direct object in an OVS sentence. The fourth group represents learners who have not grasped object marking in either task. While these learners may have declarative knowledge of the rule, when the task demands require in-line processing, it is evident that the rule has not made its way into the procedural knowledge of the learner. The results also appear to describe a path of acquisition. At the lowest level, there are no learners who grasp marking in both structures, and at the most advanced level, level 4, all participants recognize object marking in both syntactic structures.

Groups 2 and 3 of Table 2 are problematic. At issue is the acquisition of a rule. We will consider group 3 first. If learners do not mark objects in an oral task but are able to recognize marked objects in an aural task, it could be said that learners must acquire two separate rules. One form-meaning connection refers to object marking in SVO order and another form-meaning connection for OVS order. The reader may wish to see a further breakdown to know just how many OVS sentences were correctly interpreted (See Table 3). Not surprisingly, participants at Level 1 show low levels of ability to recognize OVS order. Even so, four of the participants interpreted 37.5% of the OVS sentences correctly. More interestingly, as learners move to higher levels of exposure and/or proficiency, there are some who show increasing abilities to recognize OVS order while still lacking any evidence of acquisition of marking in SVO structures. At level 3, all four participants who do not produce marking in the oral task interpret at least half of the OVS sentences correctly. At Level 4, the only two participants that do not produce marking on task 1 interpreted all eight of the OVS sentences correctly. The data suggest that it is not necessary to acquire a marking rule for SVO sentences in order to acquire correct OVS processing.

The data in Table 3 provide some evidence that participants do not acquire one “personal *a*” rule. However, there are at least three counterarguments that could be made. One argument concerns processing: Which task requires more processing resources, the speaking task or the listening task? Listening was formerly seen as a passive skill, but Rivers, Azevedo, Heflin, Jr. & Hyman-Opler (1976) concluded that listening is an active skill in that construction of meaning is an active process, (and formulating meaning was necessary to correctly interpret the OVS sentences in the aural task). Still, some could argue that because speaking also involves the construction of meaning, as well as resources required to produce the output, it is more taxing on our mental processing resources. Thus, the participants represented in Table 3 may have lacked the processing resources needed on the oral task while still being able to perform better on the aural task.

Table 3

<i>Range of Correct OVS Interpretation while Showing No Ability to Mark Objects on Oral Task</i>				
<u>OVS correct</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Level 4</u>
1	5	4		
2	3	1		
3	4	2		
4			2	
5			1	
6		1		
7			1	
8				2
Total	12	8	4	2

The other two arguments are related to task effect. First, the second task, a written contextualized task purposefully drew the attention of the participant to prepositions. 20 of the 38 examples in task two concerned *a* as a direct object marker. It could be said that through noticing of the form, declarative knowledge was activated in memory and led to better performance on the aural task. The second task effect involves the addition of a direct object pronoun in each of the OVS sentences. For example, in *A las chicas las encontraron los chicos debajo de la cama* ‘The boys found the girls under the bed’, the pronoun *las* ‘them (feminine)’ is doubled with the overt object noun phrase. This leads to the possibility that these learners have not developed any procedural knowledge of marking, either in SVO or OVS sentences, but are using the object pronoun as a cue to recognize OVS order.

These three arguments, one based on processing resources and the other two based on task effect are inadequate to explain the results for group 2 in Table 2, that of ‘A’ use plus all incorrect (OVS). 13.7% of all participants fall into this category. This column is expanded in Table 4. At level 1, four participants used *a* on the oral task but did not recognize any OVS sentences. This number increases to seven at level 2. At level 3, there are three participants that fit this pattern. Most noticeably, two produce native-like levels of marking during the SVO oral task but are still unable to correctly process any OVS sentences.

Because there are participants that fall into both groups 2 and 3 from Table 2, an argument for difficulty of processing is impossible in either direction. If learners acquire a rule that says ‘mark human animate direct objects’, one that is elegant in its simplicity, how is it that they can: (1) produce *a* on a speaking task, (2) have their attention directed to the *a* on the second task, and (3) follow this by incorrectly attaching agent status to the first noun in all OVS sentences?

It is extremely difficult to disentangle the results across the four possible outcomes. Again these are to (1) produce (at least one) marking on the oral task and interpret (at least one) OVS sentences correctly, (2) produce (at least one) marking on the oral task and interpret all OVS sentences incorrectly, (3) interpret (at least one) OVS sentences correctly and not produce any marking on the oral task, and (4) produce neither marking in any SVO sentence nor interpret any OVS sentences correctly. First, it does not appear that a single “personal *a*” rule can be acquired as procedural knowledge. While elegant in its simplicity, it does not capture what learners are acquiring. There appear to be two structures that are acquired, one for SVO patterns and the other for OVS patterns.

Table 4

Range of 'a' Use on Oral Task while Showing No Ability to Correctly Interpret OVS Sentences

<u># of times 'a'</u> <u>produced on</u> <u>oral task</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Level 4</u>
1	1	3		
2	3	1		
4		2		
5		1		
6			1	
15			1	
16			1	
Total	4	7	3	0

Note. “# of times ‘a’ used” eliminated if empty for all levels. This is why #3, 7-14, 17-20 are not listed.

Second, there is no clear relationship between the acquisition of these two patterns. This assumption is a difficult one to make as the results being compared come from two tasks that are not completely comparable. The SVO task is an oral task and the OVS task is an aural task. That said, it is still worth discussing. Based on the tasks and combining all learner levels, production of object marking in SVO structures appears before correct OVS interpretation for 13.7% of the participants. Correct OVS interpretation appears before production of object marking in SVO structures for 25.5% of the participants. These two outcomes account for 39.2% of all learners. One explanation relates to how marking rules are incorporated in the developing system. Rather than one rule called “personal *a*” which can be applied in a generative manner, it could be that the rule is constrained by the syntactic structure: (1) Mark human animate objects in SVO structures. (2) Mark human animate objects in OVS structures. In essence, two rules must be acquired by L2 learners.

Beyond a description of the acquisitional challenge of producing and interpreting direct object marking in second language Spanish, there is an issue concerning the acquisition of rules in language study in general. If learners were able to acquire a “personal *a*” rule that could be applied to all object marking, processing would be easier in theory. It may be that we as instructors propose rules that are elegant linguistic rules, possibly trying to mimic the rule system that Chomsky (2011) describes. In such a system, there are rules that “determine form-meaning relations and conditions of language use” (2011:265). These rules are general and efficient, based on natural law, and they explain much of what happens in first language acquisition. However, second language learners do not appear to apply elegant rules elegantly. Returning to the ideas of Schmidt (1990, 1992) and VanPatten (1993), noticing and restructuring might possibly be constrained by syntax. Learners would be required to notice marking in SVO structures to inform the developing system of what happens in SVO contexts and also notice marking in OVS structures to inform the developing system of what happens in OVS contexts. There is nothing that prohibits learners from noticing both structures at basically the same time in the acquisitional process. This would explain the results of those participants that have partially captured both rules. There also appears to be nothing that requires the acquisition of one form before the other, as though the forms are acquired in stages. The evidence in the current study suggests that when marking in one syntactic structure is noticed and begins to restructure the developing system, this development can become complete before noticing of the other syntactic structure occurs.

Finally, what are the implications of these findings for structured input design, a methodology that has been shown to improve form-meaning connections? The word order processing studies suggest that there are factors that attenuate the Agent-Verb-Object strategy. The notion of form in these studies extends form to sentential form rather than solely focusing on morphological form. The assumption is that by attenuating the faulty processing strategy, learners will make the connection between sentential form and meaning. I wonder, though, if these attenuating factors act more like VanPatten’s (2004:14) Primacy of Meaning Principle which states, “Learners process input for meaning before they process it for form.” Topic familiarity, as an attenuating factor, may provide the information (meaning) required in order to interpret an OVS sentence correctly such that the learner does not need to pay attention to

sentential form or object marking. If it does create the form-meaning connection that is desired, we still do not know if the learners are creating the connection based on the object pronoun or the clitic. A future study could determine this and modifications to input processing activities be made to encourage the focus on making the Object marking-OVS connection more salient.

6. Conclusion

The word order research agenda has continued to find more factors that attenuate the faulty processing of word order. What is unclear is why a number of these studies point out that learners do not use, do not recognize, or do not know that *a* marks objects in Spanish as though there is a clear connection between the acquisition of word order and the acquisition of object marking. It seems that there is an assumption that the “personal *a*” rule should be integrated in the developing system as an overarching rule of object marking. Processing Instruction theory (VanPatten, 2004) suggests quite the opposite. *A* is not a content word, it is not a true lexical item, it is redundant as the clitic pronoun will follow, and it does not (necessarily) provide meaning as a grammatical form. Thus, the chances of it being processed are minimal.

The results of the current study suggest that learners do not incorporate one “personal *a*”-type object marking rule into the developing system. While being an elegant rule, learners seem to constrain the rule based on syntactic patterns, and there is no stage of acquisition pattern that describes when and how object marking patterns integrate with the developing system. Some learners recognize OVS word order patterns without showing any signs of acquiring marking in SVO structures. Others show almost native-like marking in SVO structures but are unable to interpret a single OVS sentence correctly. There may be any number of rules that we conceive of as being simple rules that will broaden the learner’s ability to become more proficient. However, it is unclear how learners apply these rules and the connections are not always the ones we think they will make.

References

- Aissen, Judith (2003). Differential object marking: Iconicity vs. economy. *Natural Language and Linguistic Theory*, 213, 435-448.
- Barcroft, Joe, & VanPatten, Bill (1997). Acoustic saliency: Testing location, stress and the boundedness of grammatical form in second language acquisition input processing. In Ana Teresa Pérez-Leroux & William R. Glass (Eds.), *Contemporary perspectives on the acquisition of Spanish, volume 2: Production, processing and comprehension* (pp. 109-121). Somerville, MA: Cascadilla Press.
- Bever, Thomas (1970). The cognitive basis for linguistic structures. In John R. Hayes (Ed.), *Cognition and the development of language* (pp. 279-362). New York: Wiley.
- Chomsky, Noam (2011). Language and other cognitive systems. What is special about language? *Language Learning and Development*, 7(4), 263-278.
- Ervin-Tripp, Susan M. (1974). Is second language learning like the first?. *Teaching English to Speakers of Other Languages Quarterly*, 8, 111-125.
- Glisan, Eileen (1985). The effect of word order on listening comprehension and pattern retention: An experiment in Spanish as a foreign language. *Language Learning*, 35(3), 443-472.
- Guijarro-Fuentes, Pedro, & Marinis, Theodoros (2007). Acquiring the syntax/semantic interface in L2 Spanish: The personal preposition *a*. *Eurosla Yearbook 2007*, 7, 67-87.
- Guijarro-Fuentes, Pedro, & Marinis, Theodoros (2009). The acquisition of personal preposition *a* by Catalan-Spanish and English-Spanish bilinguals. In Joseph Collentine, Maryellen García, Barbara Lafford, & Francisco Marcos Marín (Eds.), *Selected Proceedings of the 11th Hispanic Linguistics Symposium* (pp. 81-92). Somerville, MA: Cascadilla Proceedings Project.
- Houston, Tony (1997). Sentence processing in Spanish as a second language: A study of word order and background knowledge. In Ana Teresa Pérez-Leroux & William R. Glass (Eds.), *Contemporary perspectives on the acquisition of Spanish, volume 2: Production, processing and comprehension* (pp. 123-134). Somerville, MA: Cascadilla Press.
- Lee, James (1987). Morphological factors influencing pronominal reference assignment by learners of Spanish. In Terrell A. Morgan, James F. Lee, & Bill VanPatten (Eds.), *Language and language use: Studies in Spanish* (pp. 221-232). Lanham, MD: University Press of America.
- Lee, James, & Malovrh, Paul (2009). Linguistic and non-linguistic factors affecting OVS processing of accusative and dative case pronouns by advanced L2 learners of Spanish. In Joseph Collentine, Maryellen García, Barbara Lafford, & Francisco Marcos Marín (Eds.), *Selected Proceedings of the 11th Hispanic Linguistics Symposium* (pp. 105-116). Somerville, MA: Cascadilla Proceedings Project.

- Leonetti, Manuel (2004). Specificity and differential object marking in Spanish. *Catalan Journal of Linguistics*, 3, 75-114.
- LoCoco, Veronica (1987). Learner comprehension of oral and written sentences in German and Spanish: The importance of word order. In Bill VanPatten, Trisha Dvorak, & James Lee (Eds.), *Foreign language learning: A research perspective* (pp. 119-129). Rowley, MA: Newbury House.
- Malovrh, Paul (2006). L2 sentence processing of Spanish OVS word order and direct object pronouns: An analysis of contextual constraints. In Nuria Sagarra & Almeida Jacqueline Toribio (Eds.) *Selected Proceedings of the 9th Hispanic Linguistics Symposium* (pp. 169-179). Somerville, MA: Cascadilla Proceedings Project.
- Montrul, Silvina (2004). Subject and object expression in Spanish heritage speakers: A case of morpho-syntactic convergence. *Bilingualism: Language and Cognition*, 7(2), 125-142.
- Nam, Eileen. (1975). Child and adult perceptual strategies in second language acquisition. Paper presented at the 1975 Teaching English to Speakers of Other Languages Convention. Los Angeles.
- Rivers, Wilga, Azevedo, Milton, Heflin, Jr., William, & Hyman-Opler, Ruth (1976). *A practical guide to the teaching of Spanish*. New York: Oxford University Press.
- Sanz, Cristina (1997). Experimental tasks in SLA research: Amount of production, modality, memory, and production processes. In Ana Teresa Pérez-Leroux & William R. Glass (Eds.), *Contemporary perspectives on the acquisition of Spanish, volume 2: Production, processing, and comprehension* (pp. 98-111). Rowley, MA: Newberry House.
- Schmidt, Richard (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11(2), 129-159.
- Schmidt, Richard (1992). Psychological mechanisms underlying second language fluency. *Studies in Second Language Acquisition*, 14, 357-385.
- Torrego, Esther (1998). *The dependencies of objects*. Cambridge, MA: MIT.
- VanPatten, Bill (1984). Learners' comprehension of clitic pronouns. More evidence for a word order strategy. *Hispanic Linguistics*, 1, 57-67.
- VanPatten, Bill (1993). Grammar-teaching for the acquisition rich classroom. *Foreign Language Annals*, 26(4), 435-450.
- VanPatten, Bill (1996). *Input processing and grammar instruction: Theory and research*. Norwood, NJ: Ablex.
- VanPatten, Bill (Ed.). (2004). *Processing instruction: Theory, research and commentary*. Mahwah, NJ: Lawrence Erlbaum Associates.
- VanPatten, Bill, & Cadierno, Teresa (1993). Explicit instruction and input processing. *Studies in Second Language Acquisition*, 15, 225-243.
- VanPatten, Bill, & Houston, Tony (1998). Contextual effects in processing L2 input sentences. *Spanish Applied Linguistics*, 2, 53-70.

Selected Proceedings of the 2012 Second Language Research Forum: Building Bridges between Disciplines

edited by

Ryan T. Miller, Katherine I. Martin,
Chelsea M. Eddington, Ashlie Henery,
Nausica Marcos Miguel, Alison M. Tseng,
Alba Tuninetti, and Daniel Walter

Cascadilla Proceedings Project Somerville, MA 2014

Copyright information

Selected Proceedings of the 2012 Second Language Research Forum:

Building Bridges between Disciplines

© 2014 Cascadilla Proceedings Project, Somerville, MA. All rights reserved

ISBN 978-1-57473-464-5 library binding

A copyright notice for each paper is located at the bottom of the first page of the paper.

Reprints for course packs can be authorized by Cascadilla Proceedings Project.

Ordering information

Orders for the library binding edition are handled by Cascadilla Press.

To place an order, go to www.lingref.com or contact:

Cascadilla Press, P.O. Box 440355, Somerville, MA 02144, USA

phone: 1-617-776-2370, fax: 1-617-776-2271, sales@cascadilla.com

Web access and citation information

This entire proceedings can also be viewed on the web at www.lingref.com. Each paper has a unique document # which can be added to citations to facilitate access. The document # should not replace the full citation.

This paper can be cited as:

Killam, Jason. 2014. Direct Object Marking and Word Order Processing in Spanish: An Unclear Connection. In *Selected Proceedings of the 2012 Second Language Research Forum*, ed. Ryan T. Miller et al., 101-109. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #3089.