Aspectual Differences with Syntactic Consequences: Argument Structure Alternations in L2 Spanish

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1. Introduction

The aim of this article is to explore the L2 acquisition of argument structure by L1 English L2 Spanish learners. In particular, the study tries to determine whether L2ers are aware of the subtle aspectual distinctions that characterize different classes of psych-verbs and how these are encoded in their respective morphosyntactic configurations. The role of universal principles is considered as an essential element in this acquisition process that cannot be explained entirely in terms of L1 transfer, instruction or transparent extraction from the input. The organization of this article is the following: section 2 presents the theoretical issue under investigation, that is, the acquisition of argument structure. Section 2 describes the phenomenon studied in the current project, specifically, Spanish psych-verbs. Section 4 introduces the empirical study and section 5 offers some concluding remarks.

2. The theoretical problem: The L2 acquisition of argument structure

There are different proposals on what argument structure is and how it should be defined. For some, it is simply a list of arguments (Levin & Rappaport-Hovav, 1995). For others, this list is itself structured. For instance, Grimshaw (1990, p. 4) defines argument structure in the following way: "A-structure is a structured representation that represents prominence relations among arguments. The prominence relations are jointly determined by the thematic properties of the predicate (via the thematic hierarchy) and by the aspectual properties of the predicate." More recently, Bowerman & Brown (2008, p. 1) define it as follows: "The array of participants associated with verbs and other predicates and how these participants are mapped to syntax." For instance, in (1) the transitive verb *estudiar* 'to study' subcategorizes for two arguments: *María* is the Agent and *matemáticas* 'Mathematics' is the Theme.

(1) María estudia matemáticas
     María study-3sg. Math
     María studies Math

While there are certain regularities in the mapping of argument structure to syntax (e.g. Agents tend to be subjects), there is also a great deal of variation in the way argument structure is represented both in a specific language and crosslinguistically. Thus, the acquisition of argument structure represents a logical problem of language acquisition because the input to which the learner is exposed is underdetermined. Consequently, some researchers have proposed that universal principles need to guide learners in order to achieve an appropriate representation (Gleitman, 1990; Grimshaw, 1981; Landau & Gleitman, 1985; Pinker, 1989). Additionally, in the case of L2 acquisition, because the L1 and the L2 mappings do not necessarily have to coincide, we could expect to find both overgeneralization and undergeneralization problems. I proceed to study these issues as they relate specifically to the acquisition of Spanish psych-verbs.

3. The phenomenon under investigation: Argument structure of psychological predicates

3.1. The classification of psychological predicates

Psychological predicates are verbs that express psychological or emotional states. They represent a typical case of the lack of a one-to-one mapping between meaning and syntactic structure since their similar meanings are represented through distinct syntactic configurations. Belletti & Rizzi (1988) provided the first tripartite classification of these verbs in Italian, which has been partially replicated for Spanish (Parodi-Lewin, 1991; Franco & Huidobro, 2003). In broad terms, Class I involves a regular transitive construction with an Experiencer subject and a Theme object (2). Class II is causative in nature with a Causer in subject position and an Experiencer in object position (3). Finally, Class III, includes unaccusative constructions (4):

(2) María odia las verduras
     María hates-3sg. the vegetables
     María hates vegetables

(3) María preocupó a Juan
     María worried-3sg. to Juan
     María worried Juan

(4) A María le encantan los zapatos
     To María le-dat. cl. love-3pl. the shoes
     Shoes are pleasing to María/
     María loves shoes

Particularly, this study focuses on classes II and III in order to explore how their different aspectual properties and the way these are encoded in their morphosyntactic structure is understood by non-native speakers. At an aspectual level, the main difference between classes II and III is that while Class II is eventive, Class III is stative. As Arad (1998) argued, the difference between the eventive and the stative interpretations is that whereas the eventive involves a change of state in the Experiencer, we do not have this change of state in the stative reading. The stative reading includes a perception by the Experiencer that causes him to be in a specific mental state. So the predicate in the sentence *Juan annoyed Ana* could be interpreted as an eventive predicate if *Juan* did something that caused *Ana* to suddenly be angry. On the other hand, if *Ana* simply gets mad with the idea or the presence of *Juan*, then the sentence has a stative interpretation.

This distinct aspectual nature results in a different morphosyntactic representation. Several theoretical accounts have been proposed to explain this fact. Kratzer (1989, 1995) analyzes the distinction between individual-level predicates (Class III) and stage-level predicates (Class II) in syntactic terms.[1] In her view, stage-level predicates have a Davidsonian event argument that denotes events or spatiotemporal locations. In contrast, individual-level predicates lack this position. Parodi-Lewin (1991) applied this same analysis to classes II and III of Spanish psych-verbs: she proposed that while Class II has a [+eventive] argument position (which is only filled when the verb has an eventive interpretation) this position is lacking in Class III. This entails some direct consequences for the word order configurations allowed by these predicates: because in the eventive syntactic configuration there is an extra event argument position, which is filled by a [+eventive] argument, it is not possible for the Experiencer to raise. Consequently, eventive psych-verbs only allow the Causer-Verb-Experiencer (CVE) configuration (5). On the other hand, the lack of this [+eventive] position in the stative Class III predicates, allows both the Theme and the Experiencer to raise. Thus, these predicates allow two possible word order configurations: Experiencer-Verb-Theme (EVT) and Theme-Verb-Experiencer (TVE) (6). The acquisition of the different word order configurations of psych-verbs will be explored in experiment 1.

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[1] I would like to underscore here that the distinction stative/eventive does not fully correspond with individual-level predicates/stage-level predicates. Whereas all individual-level predicates are stative, stage-level predicates can be both stative and eventive. However, only eventive predicates can be stage-level predicates.

(5) Class II:
    a. María preocupó a Juan (CVE)
        María worried-3sg. to Juan
    b. *A Juan preocupó María (EVC)
        To Juan worried María
        María worried Juan

(6) Class III:
    a. A María le gusta Juan (EVT)
        To María le like-3sg. Juan
    b. Juan le gusta a María (TVE)
        Juan le like to María
        Juan likes María

At the morphological level these two classes are also distinguished. Here I will focus on one specific difference: the use of antipassive *se*. Antipassive *se* is a decausativizer/detransitivizer (Franco, 1990) and, as such, it can only co-occur with the causative class of psych-verbs (Class II) since this class involves a Causer argument and follows a transitive pattern (7). On the other hand, Class III lacks a Causer argument and does not have a transitive configuration since it lacks a direct object (8). The acquisition of antipassive *se* will be studied in experiment 2.

(7) Carolina se asustó
    Carolina se scared-3g.
    Carolina got scared

(8) *Carolina se gustó
    Carolina se liked-3sg.
    Carolina got liked

It is important to understand that although the classification of psych-verbs into stative and eventive predicates is universal, the way this distinction is encoded differs from language to language. For instance, English does not have flexible word order as Spanish and it lacks clitics, so it has to resort to different strategies to encode the stative/eventive distinction in psych-verbs. Thus, the learner does not only have to understand which verbs are stative and which ones are eventive but they also have to figure out how these meanings are encoded in the L2. An added complication to the learner's task is that there are verbs that alternate between classes II and III, that is, they can have both an eventive (9) and a stative interpretation (10) depending on context.

(9) María se preocupa por sus notas (II)
    María se worry-3sg. for her grades
    María worries about her grades

(10) A María le preocupan sus notas (III)
    To María le worry-3pl. her grades
    Her grades worry María

3.2. The acquisition of psychological predicates

There have been plenty of studies that have investigated the challenges L2 learners experience when acquiring the non-canonical alignment of thematic roles to syntactic positions in these predicates (Juffs, 1996; Montrul, 1998; White et al. 1999; *inter alia*). However, before this project, Rubio (2000, 2001) had been the only author who had dealt with the acquisition of the properties that distinguish classes II and III by L2ers. Particularly, he focused exclusively on the verbs that alternate between different classes (*preocupar*-A (accusative) class and *preocupar*-D (dative)). The goal of his study was to determine whether traditional instruction or processing instruction (VanPatten, 1996) was more beneficial for acquiring a specific property of psych-verbs: the use (or lack of use) of the clitic in classes II and III. Notwithstanding, little is known about whether learners do in fact acquire the properties that distinguish these two aspectual classes and what this means for the mental representation of these properties, which is what I intend to determine in this article.

4. The empirical study

4.1. Research questions

The goal of this study is to determine whether L2ers of Spanish understand the different aspectual nature of psych-verbs, specifically classes II and III, and how this is encoded in morphosyntactic terms. That is, can Spanish L2ers acquire the argument structure alternations that take place in classes II and III of psych-predicates? For that purpose, word order alternations and the use of antipassive *se* will be tested on these two classes. In particular, the study targets two very concrete questions

(11) Are L2ers aware of the fact that Class III has two possible word order configurations while Class II allows only one? More specifically, in experiment 1, I ask the following question: Do non-native speakers distinguish between the ungrammatical status of Experiencer-Verb-Causer (EVC) sentences in Class II and the grammatical status of Theme-Verb-Experiencer (TVE) sentences in Class III?

(12) Are L2ers aware of the fact that Class II allows antipassive *se* whereas Class III does not? Specifically, the main question in experiment 2 is: Do L2ers prefer antipassive *se* in Class II over Class III?

4.2. Participants

101 subjects participated in this study. 36 native speakers from Spain constituted the control group. All participants had a college degree or were attending college at the time of the experiment. With regard to the level of English of the control participants, they had either a very basic knowledge or no knowledge of the language. The experimental group consisted of 65 non-native speakers of Spanish whose first (and only) language was English. The non-native speakers were assigned to different proficiency groups according to their score in an independent proficiency test (i.e. a section of DELE (Diploma de Español como Lengua Extranjera). This is the common standardized measure used by many L2 researchers (e.g. Rothman & Iverson, 2008). Sixteen subjects were classified as near-native speakers, 21 subjects as advanced, 16 subjects as intermediate and, 12 as low-proficiency learners. All of them had started learning Spanish after puberty.

4.3. Methodology

This study encompasses 2 grammaticality judgment tasks, which were conducted in PsyScope (Cohen, MacWhinney, Flatt, & Provost, 1993) Each subject received a specific set of instructions before starting the task and conducted a training trial before each of the experiments. Both tasks followed the same procedure: participants were presented with a series of sentences on a computer screen that they had to rate on a Likert scale according to how natural the sentence sounded to them.[2] Each experiment was organized as follows.: first of all, a brief paragraph showed up in the computer screen. This paragraph provided a context for the sentences that the subject had to rate subsequently. Next, he would see the sentences in consecutive order. So, the subject had to rate each sentence in isolation. Subjects were not allowed to go back or change their answers. All items were randomized.

In experiment 1, there were 48 sentences: 24 test items and 24 fillers. Half of the test items contained sentences with Class II verbs and the other half contained Class III verbs. The contexts in these tasks were created in a way that underscores the aspectual properties of each class respectively. Thus, for Class II verbs, I created a context that would be unambiguously interpreted as eventive. In turn, I created a context for Class III verbs that highlighted the stative nature of these predicates. (13) and (14) are examples of a test items. In (13), (13a) is completely grammatical whereas (13b) is completely ungrammatical according to theoretical accounts (Parodi-Lewin, 1991). In contrast, in (14), while both constructions are grammatical, (14a) is the unmarked construction. So, when comparing (13a) to (14a) we expect both constructions to get similar ratings since both constructions are grammatical. However, when comparing (13b) and (14b) the prediction would be that the ratings for (14b) would be significantly higher than for (13b) since (14b) is grammatical (although marked) and (13b) is simply ungrammatical. Due to space limitations, I will focus only on the second comparison ((13b) EVC vs. (14b) TVE).

(13) Nico estaba estudiando silenciosamente cuando de repente Ana entró en la habitación
Nico was silently studying when Ana suddenly came into the room
    a. Ana asustó a Nico (Causer-Verb-Experiencer-CVE)

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[2] This is the way the scale was presented to them: (1) The sentence sounds really bad. You would never use it and you cannot imagine any native speaker using it. (2) The sentence sounds bad to you but not as bad as 1. You can imagine some native speakers using this sentence. (3) You can't decide or the sentence doesn't sound too bad or too good. (4) The sentence sounds pretty good to you but not as good as 5. (5) The sentence sounds good to you.

Ana scared-3sg. to Nico
Ana scared Nico
b. *A Nico asustó Ana (Experiencer-Verb-Causer-EVC)
To Nico scared-3sg. Ana
Ana scared Nico

(14) Durante toda su infancia, Nico le tenía miedo a la profesora de Matemáticas
During his whole life, Nico was scared by the Math teacher
a. A Nico le asustaba la profesora de Matemáticas (Experiencer-Verb-Theme-EVT)
To Nico le-dat cl. scared-3sg the teacher of Math
The Math teacher scared Nico
b. La profesora de matemáticas le asustaba a Nico (Theme-Verb-Experiencer-TVE)
The teacher of Math le-dat cl. scared-3sg to Nico
The Math teacher scared Nico

In experiment 2, there were also 48 test sentences: 24 test items and 24 fillers. Half of the test items included Class II psych-verbs, which allow the *se*-construction while the other half included Class III predicates, which do not. So, in (15) both options are grammatical while in (16) the option with antipassive *se* is ungrammatical. Again, due to space limitations, I will focus exclusively on the contrast between (15b) and (16b).

(15) Todos los departamentos de letras en las universidades están cerrando. Los chicos ya no quieren estudiar arte o literatura. Ahora todo el mundo estudia negocios
All of the humanities departments at different universities are closing. Students don't want to study art or literature. Now, everyone studies business
a. A los jóvenes no les interesa la cultura
To the young no les-dat cl interest-3sg the culture
Young people are not interested in culture
b. Los jóvenes no se interesan por la cultura
To the young no se-antipassive interest-3pl for the culture
Young people are not interested in culture

(16) En esta universidad todo el mundo quiere salir de fiesta pero nadie presta atención a las cosas importantes
At this university, everyone wants to go out but nobody pays attention to the important things
a. A nadie le importa la política
To nobody le-dat cl care the politics
Nobody cares about politics
b. *Nadie se importa sobre la política
Nobody se-antipassive care about the politics
Nobody cares about politics

4.4. Results

A repeated-measures ANOVA was conducted to determine the relation between the subjects' sentence ratings and the conditions tested in each experiment. I tested the appropriate contrasts adjusting for multiple observations within subjects. These contrasts will be reported through Wald's chi-squares.[3] In experiment 1, the control group showed to be aware of the word order patterns in different classes of psych-verbs, although the distinctions were not as categorical as described in theoretical accounts. As predicted, the TVE (Class III) was rated significantly higher than EVC (Class II) (χ^2=36.56, p<.0001). That is, while one order was clearly grammatical, the other was rated as ungrammatical. This indicated that, for native speakers, the semantically different classes are equally different at the syntactic level. Interestingly, the mean for EVC order is not particularly low

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[3] Please notice that these are not Pearson's chi-squares. A Wald's chi-square is analogous to the F statistic when the model makes no assumption about the distribution of the error term (Zeger et al., 1988).

(mean=2.25), although it received an ungrammatical rating (see section 4.5 for an explanation). As was the case for the native speakers, near-natives also showed knowledge of the word order restrictions in psych-predicates by scoring TVE in Class III significantly higher than EVC in Class II (χ^2=66.29, p<.0001). The advanced speakers also respected the word order patterns presented by classes II and III by rating TVE in Class III significantly higher than EVC in Class II (χ^2=72.49, p<.0001). The intermediate learners also gave a higher rating to TVE sentences with Class III verbs than EVC sentences with Class II verbs (χ^2=4.30, p=0.0382). Finally, low-proficiency learners also rated TVE with Class III verbs higher than EVC with Class II (χ^2=25.80, p<.0001).

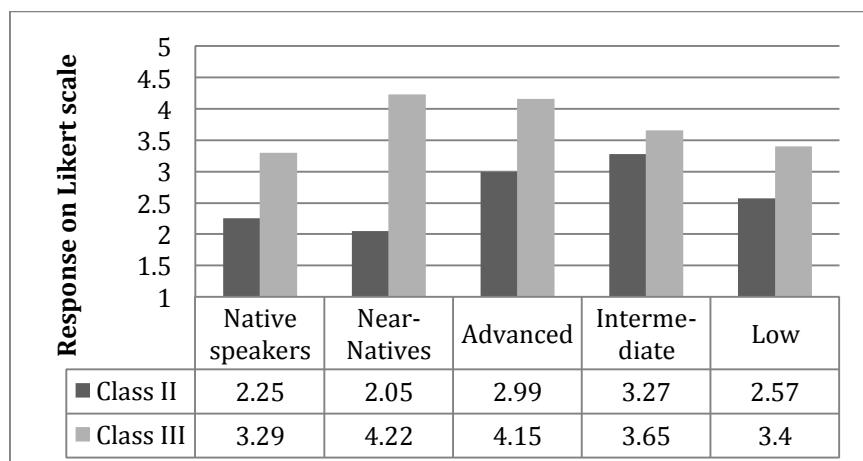|	Native speakers	Near-Natives	Advanced	Interme-diate	Low
Class II	2.25	2.05	2.99	3.27	2.57
Class III	3.29	4.22	4.15	3.65	3.4

Figure 1. Response means for EVC (Class II)/ TVE (Class III) sentences

In experiment 2, the control group made a clear distinction between classes II and III regarding the use of the *antipassive se*. Sentences with antipassive *se* containing Class III psych-verbs were rated significantly lower than those containing Class II psych-verbs (χ^2=1799.7, p<.0001). The near-native speaker group was also sensitive to the use of the *antipassive se.* This morpheme received significantly higher ratings with Class II than with Class III psych-verbs (χ^2=172.89, p<.0001). The advanced group was also aware of the distribution of antipassive *se* with the different classes of psych-verbs. They showed this by giving significantly higher ratings to the sentences with antipassive *se* that contained Class II verbs compared to those which contained Class III verbs (χ^2=192.10, p<.0001). The intermediate group also rated sentences with antipassive *se* significantly higher when the sentence included a Class II verb than when it included a Class III predicate. (χ^2=21.18, p<.0001). And the same was true for low-proficiency speakers (χ^2=11.85, p=0.0006).

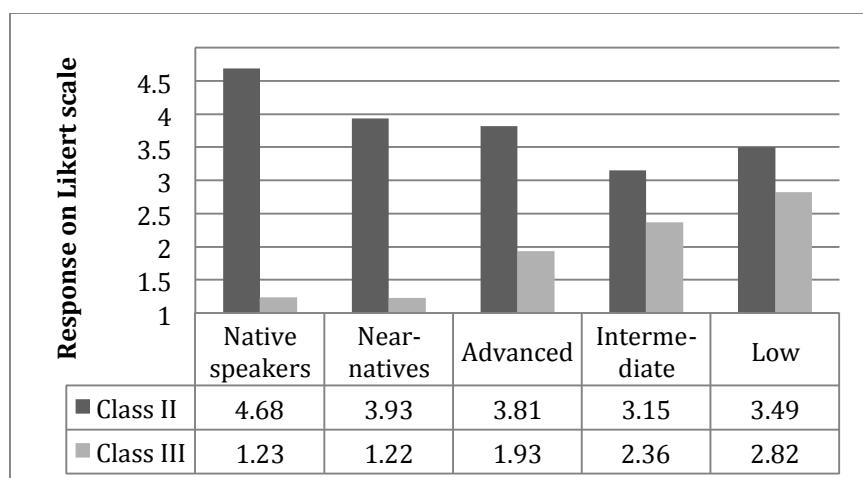|	Native speakers	Near-natives	Advanced	Interme-diate	Low
Class II	4.68	3.93	3.81	3.15	3.49
Class III	1.23	1.22	1.93	2.36	2.82

Figure 2. Response means for sentences with antipassive se

4.5. Discussion

In experiment 1, both native and non-native speakers recognized that whereas TVE is grammatical in Class III, EVC is ungrammatical with Class II. This indicates that L2 learners have knowledge of the word order alternations available for the different classes of psych-predicates in Spanish. However, we saw that EVC sentences, predicted to be fully ungrammatical, were rated higher than expected by all groups including the native speaker group. This could have been the result of participants assigning this sentence a focus fronting interpretation (*A NICO asustó Ana* 'Ana scared Nico') where the sentence without clitic would be actually grammatical (Slabakova et al, 2011).[4] The behavior of non-native learners in this experiment and the way they pattern with native speakers have direct implications for L2ers' mental representations. The fact that EVC is always given the lowest ratings is consistent with Parodi-Lewin's (1991) argument: since the [+eventive] argument position projected for Class II verbs is filled by a [+eventive] argument when sentences have an eventive interpretation, the Experiencer cannot be hosted in that position and, as a result, it cannot raise. In Class III, however, the Theme can freely move since this class lacks the [+eventive] argument position. Consequently, by analyzing the performance data of L2ers we can conclude that their mental representation of Class II and Class III psych-verbs is in fact different, which becomes evident in L2ers' understanding of the syntactic reflexes of these two distinct aspectual classes.

The bigger question now is: how do L2ers arrive at these conclusions? First of all, neither the fact that psych-verbs can be classified into different classes according to their aspectual properties, nor the fact that these classes have distinct morphosyntactic characteristics is ever introduced in the L2 classroom. Thus, non-native speakers' understanding of the word order patterns compatible with different classes of psych-verbs is not the result of pedagogical intervention. Secondly, the restrictions that regulate word order in psych-verb constructions are quite complex, which make the L2 input fairly opaque: EVT and TVE are both grammatical with Class III predicates but they are so to different degrees since EVT is the unmarked order. An additional complicating factor is the fact that these orders are regulated by pragmatic factors (Franco & Huidobro; Gómez Soler, 2012). Furthermore, Class II is supposed to only have one possible combination of arguments (CVE). However, the order EVC could be grammatical under a focus fronting interpretation. In the third place, the L2 learners' L1 could not guide them in this particular property. English has the same stative/eventive alternation with psych-verbs, however the reflexes of this distinction are different in English and Spanish. In English, both classes II and III have only one possible order: CVE (*Ana scared Nico*) and TVE (*Shoes are pleasing to María*) respectively. The restricted word orders of the participants' L1 will not provide them with enough information to understand the syntactic subtleties of these predicates in Spanish.

Next, the results of experiment 2 show that L2 learners are aware of the restrictions related to the use of antipassive *se* with Spanish psych-predicates: Overall, sentences with *antipassive se* received higher ratings with Class II verbs than with Class III. This finding shows that subjects have a solid understanding of the use of the decausativizer *se* and its restricted use with only causative Class II verbs. In general, L2ers complied with native rules; however, they do deviate sometimes from the native patterns of response: although intermediate and low-proficiency participants made a significant distinction between the use of antipassive *se* in Class II and III, their ratings for antipassive *se* with Class III verbs (**Juan se gusta con María* 'Juan likes María') are surprisingly high considering this construction is completely ungrammatical. Their rejection of this class is definitely not as categorical as it was for the other groups. I cannot confirm where their indeterminate judgments come from. However, a potential hypothesis is that they confused antipassive *se* and reflexive anaphoric *se*. This is possible because, whereas antipassive *se* is only grammatical with Class II psych-verbs, the reflexive clitic is grammatical with classes II (17) and III (18) (Franco,1990).

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[4] All of the sentences in the experiment were recorded with neutral intonation to avoid this phenomenon; however, I cannot be sure of what kind of prosodic interpretation the participants were assigning to the sentences. If I had included test items with both neutral and focus fronting intonation, this could have helped me confirm this hypothesis that focus fronting is the responsible of the high ratings of this type of test items.

(17) María se enfadó (consigo misma)
　　María reflexive *se* got angry-3sg.
　　(with herself)
　　María got angry at herself

(18) María se encanta (a sí misma)
　　María reflexive *se* loves-3sg. (to
　　herself)
　　María loves herself

Even though it is hard to determine how plausible this hypothesis is, what is clear is that the problem of the lower-proficiency learners is connected with the multiplicity of meanings and functions that the pronoun *se* plays in Spanish grammar (Solé & Solé, 1987; Batchelor & Pountain, 1992). This morpheme, which is connected to argument structure, varies in meaning and function depending on the type of predicate (e.g. unergative (e.g. *to talk*), unaccusative (e.g. *to arrive*), transitive (e.g. *to eat),* alternator (i.e. those which have a transitive and an anticausative interpretation, (e.g. *to break*)) and the number of arguments involved in a sentence as well as their thematic roles. Hence, the homophonous *se* constructions, might have blurred the judgments of the two less proficient groups.

Again, we need to explore the question of how L2ers could have achieved this (almost) native behavior. First of all, with respect to instruction, as in the case of experiment 1, the fact that non-native participants respected the restrictions imposed by antipassive *se* is remarkable since this issue is never presented or practiced in the L2 classroom. In addition, the antipassive construction involves quite a large degree of complexity since it requires understanding of syntax, how this relates to semantics, specifically lexical aspect (i.e. eventiveness), and how this is encoded morphologically (i.e. *se* morpheme). The interaction between these factors is complicated and renders the L2 input extremely unclear, so it would be hard for the learner to extract any patterns from the input. Furthermore, we have to consider the potential role of participants' L1 in aiding them to restrict their options in the current experiment. It is conceivable that subjects could have transferred their knowledge from their L1 to complete this task since, in English, this phenomenon is also captured by an overt morpheme; namely, a *get* passive (Toth, 2000, p.180):

(19) √María se preocupó
　　√*María got worried*

(20) *María se gustó
　　**María got liked*

However, this transfer of knowledge is not as straightforward as it seems at first sight since the pronoun *se* in Spanish has multiple counterparts in English ranging from the *get* passive as we just saw, to a zero morpheme in the case of anticausative *se*, a reflexive pronoun (e.g. himself, herself) in the case of reflexive *se*, a reciprocal pronoun (e.g. each other) in the case of reciprocal *se*, and *be* passives in the case of passive *se*. So, since there is a one-to-many correspondence between Spanish and English with respect to the pronoun *se*, guidance from the L1 is not completely transparent: it would certainly require the learner to achieve a certain level of understanding of the antipassive construction as compared to other *se* constructions in Spanish before the L1 could provide any scaffolding. Certainly, the L2 learner will need to develop sensitivity to the different classes of verbs (and their argument structure) and how these classes interact with the pronoun *se* in order to successfully acquire antipassive *se* with psych-verbs as we can see in Table 1. Table 1 is a replication of Toth's (1997, p. 25) table, which illustrates how different types of *se* combine with different classes of verbs and their arguments taking into account also their thematic roles.

Table 1. The uses of se mapped across four major semantic classes

VERB CLASS and D-STRUTURE	Impersonal *se*	Passive *se*	Anticausative *se*	Reflexive/reciprocal *se*
Unergatives: *nadar* (to swim) [NP [_{VP}V]]	√ agent	*	*	*
Unaccusatives: *llegar* (to arrive) [*e* [_{VP}V NP]]	√ theme	*	*	*
Alternators: *romper* (to break) [*e* [_{VP}V NP]] or [NP [_{VP}V NP]]	√ agent	√ agent	√ agent	√ theme/benefactive
Accusatives *ver* (to see) [NP [_{VP}V NP]]	√ theme	√ agent	*	√ theme/benefactive

5. Conclusion

Taking stock, the task of the L2 learner acquiring the argument structure alternations of Spanish psych-verbs would be daunting were he not guided by some universal principles, particularly, regarding the grouping of predicates into semantic classes and the regularities provided by linking rules that map specific meanings to particular morphosyntactic structures. This is so because of three main reasons: (1) participants' behavior cannot be explained through pedagogical intervention, (2) the guidance that the L1 could provided is very restricted and (3) the input is underdetermined. Additionally, their mental representation of these classes seems to be UG-constrained because the types of errors that participants made could be explained without resorting to the concept of *wild grammars*: in experiment 1, L2ers' errors arouse from a methodological issue. On the other hand, in experiment 2, the problems experienced by intermediate and low-proficiency participants represented a mapping error related to the numerous functions of the pronoun *se* and rather than an inability to categorize different classes of psych-verbs.

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Proceedings of the 12th Generative Approaches to Second Language Acquisition Conference (GASLA 2013)

edited by Jennifer Cabrelli Amaro, Tiffany Judy, and Diego Pascual y Cabo

Cascadilla Proceedings Project   Somerville, MA   2013