

Overgeneralization of Causatives and Transfer in L2 Spanish and L2 English

Mónica Cabrera and María Luisa Zubizarreta
University of Southern California

1. Introduction

Research on the L2 acquisition of argument structure has shown that beginner and intermediate L2 learners are strongly influenced by their L1 (Juffs 2000, White 2003). For example, studies on the dative alternation (*Mary sent a book to John./Mary sent John a book.*) indicate that L2 learners overgeneralize or undergeneralize this alternation according to the properties of their L1. At early stages of acquisition, L1 English speakers learning L2 French assume that double object constructions are allowed in French (White 1987, 1991), and L1 French speakers learning L2 English reject these constructions in English (Mazurkewich 1984). Overgeneralization (and undergeneralization) errors motivated by transfer of L1 knowledge are predicted by the Full Transfer/Full Access (FT/FA) hypothesis (Schwartz and Sprouse 1994, 1996), which states that the L1 in its entirety is the initial state of L2 acquisition. As for how learners recover from these errors, White (1991) proposes that undergeneralization errors are more easily unlearned since L2 learners can rely on positive evidence in order to broaden their grammar. Overgeneralization errors are presumably more difficult to overcome since L2 learners would need to rely on direct or indirect negative evidence to restrict their interlanguage grammars¹.

Previous research on the L2 acquisition of the causative alternation (*Peter broke the window./The window broke.*) have found that L1 English speakers learning L2 Spanish (Montrul 1997, 1999; Cabrera and Zubizarreta 2003a) and L1 Spanish speakers learning L2 English (Moore 1993; Montrul 1997, 2001a) correctly accept/produce lexical causatives with alternating unaccusatives (*Peter broke the window./Pedro rompió la ventana.*). However, to some degree, these learners overgeneralize causatives, i.e. they incorrectly accept/produce lexical causatives with non-alternating unaccusatives (**Peter arrived Mary at school late./*Pedro llegó a María tarde a la escuela.*) and unergatives (**Peter laughed Mary./*Pedro rió a María.*).

Montrul (1997, 1999, 2001a) claims that transfer is not the source of overgeneralized causatives because these structures are not acceptable in the L1. She proposes that these errors are motivated by the learner's lack of knowledge of the lexico-semantic features that determine which verb classes alternate in transitivity. Given their incomplete L2 knowledge, learners resort to a default transitive lexico-semantic template (*NP CAUSE NP BECOME verb*) that they use irrespective of verb class. Moore (1993) and Cabrera and Zubizarreta (2003a), nevertheless, found that learners tend to overgeneralize causatives more with non-alternating unaccusatives than with unergatives. This preference suggests that L2 learners are sensitive to lexico-semantic verb properties that are relevant to the causative alternation in the L1. Therefore, lack of grammatical knowledge cannot fully explain responses. Cabrera and Zubizarreta (2003a) suggest that these findings are compatible with an L1 transfer analysis, in which learners generalize the properties of alternating unaccusatives to non-alternating ones.

On the other hand, Montrul (2001b), a study on the acquisition of lexical causatives with verbs of manner-of-motion, which are acceptable in English (*The general marched the soldiers to the camp.*), but unacceptable in Spanish (**El general marchó a los soldados al campamento.*), found clear transfer effects. L1 English speakers L2 learners of Spanish overgeneralized causatives with this verb class, whereas L1 Spanish speakers L2 learners of English undergeneralized causatives with it. Montrul (2001b) concludes that L1 transfer applies in some cases but not in others. Transfer does not apply in the case of overgeneralized causatives with non-alternating unaccusatives and unergatives, but it does

so with manner-of-motion verbs in lexical causatives. The causative alternation, a more universal alternation, would be less likely to motivate transfer than alternations that are more L1 specific, such as English causative pairs with verbs of manner-of-motion.

These somehow contradictory results point to the need of a more comprehensive study on the overgeneralization of causatives across different levels of proficiency, which simultaneously tests for lexical causative structures in which English and Spanish are similar and those in which they are different. A study of this nature should elucidate what role the L1 plays in the L2 acquisition of lexical causatives, if any, and at what level of proficiency. This is precisely the objective of the present study.

Our findings suggest that L2 learners make use of different aspects of their L1 knowledge at different levels of proficiency. We propose that non-advanced learners tend to focus on the L1 *constructional properties* of lexical causatives disregarding L1 *specific lexical properties* of verb classes, and advanced learners make use of both types of properties. Issues related to the L2 initial state, and the recoverability from errors at the advanced proficiency level are discussed.

The paper is organized as follows. In section 2, we present the properties of lexical causatives in English and Spanish. In section 3, we present our study (hypothesis, predictions, experimental design, and group results). In section 4, group results are discussed, and an account is proposed. In section 5, we summarize our findings and conclusions.

2. Lexical Causatives in Spanish and English

2.1 Distribution of lexical causatives

In English and Spanish, intransitives that encode change can participate in the causative alternation (e.g. Levin and Rappaport-Hovav 1995, Hale and Keyser 2002). Verbs that typically alternate are change of state unaccusatives like *break/romper*, as exemplified in (1) below. There are also change of location unaccusatives, like Spanish, *subir* ‘go up’, *bajar* ‘go down’, that can alternate in transitivity, as shown in (2). The transitive forms of such verbs are associated with the meaning given in (3).

- (1) a. Peter broke the window. / Pedro rompió la ventana.
 b. The window broke. / La ventana se rompió.
- (2) a. Pedro subió al niño a la mesa.
 ‘Pedro put the kid on the table.’
 b. El niño se subió a la mesa.
 ‘The kid got on the table.’
- (3) CAUSE [Change of State/Location]

Unergative verbs like *laugh/reír* are banned from participating in the causative alternation for principled reasons, namely they do not encode change of state or location. See (4a) below.

- (4) a. *Peter laughed Mary. / *Pedro rió a María.
 ‘Peter caused Mary to laugh.’
 b. Mary laughed. / María se rió.

However, not all unaccusatives in English and Spanish encoding change of state or location appear in lexical causatives. These include verbs of appearance (e.g. *occur/ocurrir*) and most of the inherently directed motion verbs (e.g. *arrive/llegar*); see (5)-(6) below. We will refer to these as “non-alternating unaccusatives”.

- (5) a. *Peter occurred an accident. / *Pedro ocurrió un accidente.
 ‘Peter caused an accident to occur.’
 b. An accident occurred. / Ocurrió un accidente.
- (6) a. *Peter arrived Mary at school late. / *Pedro llegó a María tarde a la escuela.
 ‘Peter caused Mary to arrive at school late.’
 b. Mary arrived at school late. / María llegó a la escuela tarde.

Chierchia (1989) suggests that non-alternating unaccusatives are idiosyncratically marked for the non-lexicalization of the transitive counterpart. If this proposal is correct, lexical causatives with non-alternating unaccusatives, although unrealized, are not grammatically impossible in the grammars of English and Spanish².

While unergatives are banned from participating in the causative alternation in both English and Spanish, the two languages differ in the following respect. As is well known, in English, but not in Spanish, manner-of-motion verbs may appear with a PP complement with a goal meaning (cf. Talmy 1985, Aske 1989), as exemplified in (7) and (8).

- (7) a. The soldiers marched to the camp.
 b. John danced across the room.
- (8) a. *Los soldados marcharon al campamento.
 b. *Juan bailó al otro lado del salón.³
- (9) a. The soldiers marched. / Los soldados marcharon.
 b. John danced. / Juan bailó.

Manner-of-motion verbs have different properties depending on whether they appear with a goal PP or not. They are unergatives when not accompanied by a PP (cf. 9), i.e. they do not necessarily encode a change of location. On the other hand, in (7), where there is a goal PP, they have unaccusative-like properties, and encode change of location (cf. Levin and Rappaport-Hovav 1995). It is therefore unsurprising that in English a predicate formed by a manner-of-motion verb and a goal PP has a causative counterpart. This is not possible in Spanish, though.

- (10) a. The general marched the soldiers to the camp.
 b. John danced Mary across the room.
- (11) a. *El general marchó a los soldados al campamento.
 b. *Juan bailó a María al otro lado del salón.

Verbs of manner-of-motion require a PP complement encoding change of location in order to be acceptable in lexical causatives. In effect, although the English causative in (12) is perhaps not as strongly unacceptable as its Spanish counterpart in (13), there is a clear contrast between (10) and (12)⁴.

- (12) a. ??The general marched the soldiers.
 b. *John danced Mary.
- (13) a. *El general marchó a los soldados.
 b. *Juan bailó a María.

As we will discuss in the next section, following Zubizarreta and Oh (2004), the similarities and differences in the distribution of lexical causatives in English and Spanish can be more clearly understood by separating the properties of the causative construction from the lexical specific properties of verb classes. In the next section, we lay out this approach to the phenomenon.

2.2 Constructional and lexical specific properties of causatives

An important insight of the constructional grammar is that there are primitive grammatical constructions/schemas that are independent of the verb's lexical meaning (Jackendoff 1990, Goldberg 1995, Goldberg and Jackendoff 2002). Examples that illustrate this point are in (14) below (from Goldberg 1995). The unacceptability of the sentences in brackets shows that the objects *us* and *the napkin*, are not the complements of *talk* and *sneeze*, respectively, but complements of the caused-motion construction (X CAUSE Y GO Path). In this construction, the object moves along a path (encoded by the PPs *into stupor* and *off the table*). The meaning of this construction is made explicit by the paraphrases in (15) (from Zubizarreta and Oh 2004).

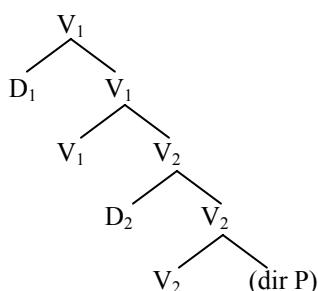
- (14) a. The professor talked us into a stupor. [cf. *The professor talked us.]
 b. He sneezed the napkin off the table. [cf. * He sneezed the napkin.]
- (15) a. The professor made us go into a stupor by talking.
 b. He got the napkin off the table by sneezing.

As the paraphrases in (15) show, the main verbs in (14) provide information about the means by which the object moves along the path, namely verbs behave like modifiers of the construction. Along these lines, a second important insight of the constructional grammar has to do with the relationship between verb meaning and construction. There are two types of relationships a verb can establish with a construction: modification and instantiation. The examples in (14) exemplify cases in which the verb modifies the construction. Verbs can also instantiate a construction if -in Goldberg (1995)'s words- "the participant roles associated with the verb can be put in a one-to-one correspondence with the argument roles associated with the construction. In this case, the constructional meaning is entirely redundant with the verb's meaning and the verb merely adds information to the event designated by the construction". Cases of instantiation of the caused-motion construction are illustrated in (16). The paraphrases in (17) show that the objects *the ball* and *the letter*, besides being arguments of the construction, are also arguments of the verbs *hand* and *send*, respectively, since their omission yields to unacceptability.

- (16) a. John handed the ball to the boy.
 b. John sent the letter to Mary.
- (17) a. John got the ball to the boy by handing *(it to him).
 b. John got the letter to Mary by sending *(it to her).

Zubizarreta and Oh (2004) propose a syntactic view of the constructional approach (for similar proposals, see Travis 2000, Hale and Keyser 2002, among others). English and Spanish lexical causatives with unaccusatives of change of state or location (cf. 1-2), and English lexical causatives with verbs of manner-of-motion with a goal PP (cf. 10) are cases of the causative construction, whose structure is shown in (18). In this analysis, the causative interpretation (X causes Y to change state/location) arises from the relationship between higher and lower V, i.e. V₁ and V₂, respectively. The structure V₂ encodes change of state if only V is present, and change of location when it includes a directional/goal preposition.

(18) The causative construction



English and Spanish lexical causatives have the same properties with respect to the general licensing of the construction. It can be licensed/instantiated only by a lexical item (verb and/or preposition) encoding a change of state or location. Unaccusatives such as *break/romper* (cf. 1) license the causative construction because they encode change of state. Unergatives, such as *laugh/reír* (cf. 4), cannot license the construction because they do not encode change. Non-alternating unaccusatives, such as *arrive/llegar* (cf. 5-6), given the fact that they encode change, should be able to license the lexical causative construction; however, as the examples above show, they are unacceptable in this configuration. Following Chierchia (1989), we assumed that non-alternating unaccusatives are lexically marked for the blocking of the lexical causative form.

English and Spanish are different with respect to verbs of manner-of-motion (cf. 10-11). The paraphrases in (19) show that, similarly to (14), manner-of-motion verbs behave like modifiers of the causative construction. The fact that these sentences without the goal PP (cf. 12) are unacceptable indicates that the objects *the soldiers* and *Mary* are not arguments of the verbs *march* and *dance*, respectively, but arguments of the construction. Zubizarreta and Oh (2004) propose that in these cases the preposition (*to* and *across*, i.e. the heads of the goal PPs *to the camp* and *across the room*) licenses the causative construction since it encodes change of location, and not the verb.

- (19)a. The general made the soldiers go to the camp by marching.
 b. John made Mary go across the room by dancing.

The difference between English and Spanish with respect to manner-of-motion verbs does not reside at the level of the construction, but at the level of lexical-specific properties of verb classes. In English, manner-of-motion verbs can modify the lexical causative construction; in Spanish, they cannot⁵.

2.3 A summary

We summarize below the properties of English and Spanish lexical causatives, along two dimensions: the general properties of the construction and specific properties of particular classes of verbs. We will refer to the former as *constructional properties* and to the latter as *lexical specific properties*.

General property of the lexical causative construction:

(20) In English and Spanish, the causative construction (cf. 18) can be licensed if the verb and/or the preposition encodes a change of state or location. (Unaccusatives that encode change therefore satisfy this requirement. Unergatives do not encode change and therefore they do not satisfy the general constructional specification.)

Specific properties of verb classes:

- (21) In English and Spanish, a subset of change of state/location unaccusatives (i.e. non-alternating unaccusatives) fails to enter the causative alternation.
 (22) In English, a manner-of-motion verb can modify the causative construction in the context of a PP that encodes change of location. In Spanish, a manner-of-motion verb can never modify the causative construction.

In our study, we investigate the role of L1 transfer in the L2 acquisition of lexical causatives. More specifically, we study how the aforementioned properties constrain the interlanguage of L2 learners at different levels of proficiency.

3. The present study

Our study is a partial replication/extension of Montrul (1997, 1999, 2001a, 2001b) with two experimental groups: L1 English/L2 Spanish, and L1 Spanish/L2 English speakers, across different levels of proficiency. In order to investigate the role of the L1 in the L2 acquisition of lexical causatives, we have tested structures in which English and Spanish have the same properties (cf. 20-21), and those in which these languages behave differently (cf. 22).

3.1 Hypothesis and predictions

The central hypothesis of the present study is that the properties of the L1 determine which verb classes are allowed in lexical causatives in the interlanguage. If there is transfer of *constructional properties* (cf. 20), we predict that:

- (23) Both experimental groups should accept lexical causatives significantly more with non-alternating unaccusatives (e.g. *arrive/llegar*) and manner-of-motion+PP (e.g. *dance/bailar*+PP) than with unergatives (e.g. *laugh/reír*) and manner-of-motion without PP (e.g. *dance/bailar*).

If there is transfer of *lexical specific properties* (cf. 20-21), we predict that:

- (24) a. Both experimental groups should reject lexical causatives with non-alternating unaccusatives (e.g. *arrive/llegar*).
 b. The L1 English/L2 Spanish group should accept lexical causatives with verbs of manner-of-motion+PP (e.g. *bailar*+PP).
 c. The L1 Spanish/L2 English group should reject lexical causatives with verbs of manner-of-motion+PP (e.g. *dance*+PP).

Our predictions are to a great extent mutually exclusive because the effects of the lexical specific constraints override the effects of the constructional constraints. Therefore, we could see the effect of the two kinds of transfer if they are at play at different stages of acquisition.

3.2 Experimental Design

3.2.1 Participants

A total of 166 adults participated in the study. There were two experimental and two control groups. The L1 English/L2 Spanish experimental group consisted of 71 students in the Spanish Basic Language Program at the University of Southern California (mean age 19.20), tested in Los Angeles, California. The L1 Spanish/L2 English experimental group consisted of 60 students in the English Language Program at the Pontificia Universidad Católica del Perú (mean age 21.40), tested in Lima, Perú. The control groups consisted of 18 native speakers of Spanish who were students at the Pontificia Universidad Católica del Perú (mean age 26.18), tested in Lima, Perú, and of 17 native speakers of English who were students at the University of Southern California (mean age 18.94), tested in Los Angeles, California.

The L2 proficiency level of the experimental groups was measured using a cloze test⁶. We preferred to use this instrument rather than the level of the class in which the students were enrolled, because, in many cases, this variable was not informative enough. However, the correlation between the enrolled class and the proficiency level according to the cloze test was significantly positive for both experimental groups (L1 English/L2 Spanish: $r=.546$, $p<.0001$; L1 Spanish/L2 English: $r=.587$, $p<.0001$).

The Cloze test consisted of three paragraphs in which every 5th word was removed. Subjects had to restore one word in a total of 75 blanks, and the test was corrected with an acceptable-word criterion. As reported in Butler (1980), the acceptable word-criterion yields a more accurate assessment of the subjects' proficiency than the exact word-criterion. The required minimum number of blank spaces depends upon the scoring method used. According to Schiarone and Schoolr (1989), with the acceptable-word criterion, a minimum of 75 blanks will suffice, while with the exact-word method, tests should contain a minimum of 100 spaces. Three significantly different proficiency levels (beginner, intermediate, and advanced) in terms of their score in the Cloze test were identified in each of the experimental groups.

3.2.2 Materials

A verb translation task (VTT), and an acceptability judgment test (AJT) were used. The L1 English/L2 Spanish group received only the Spanish version of these tests, and the L1 Spanish/L2 English received only the English version. The control groups received the tests only in their L1. In the VTT, subjects were asked to translate the verbs in Table 1. The purpose of this test was to assess the learner's knowledge of the idiosyncratic meaning of verbs, so that only the AJT responses corresponding to correctly translated verbs were used in computing results.

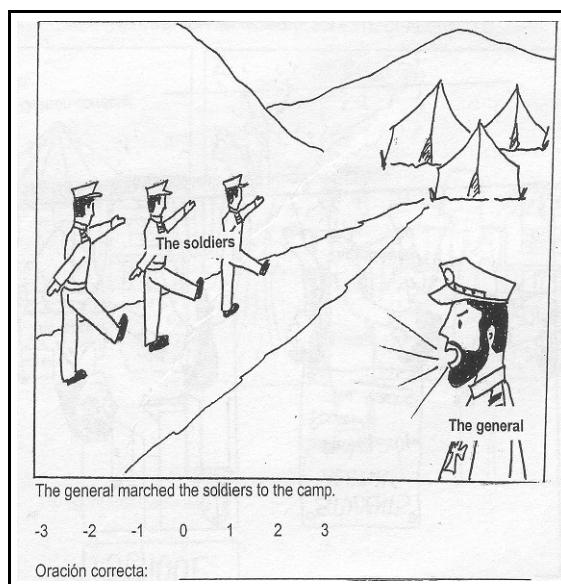
Table 1: Tested verbs in the VTT and in the AJT

Non-Alternating Unaccusatives (NAU)	Unergatives (E)	Manner (M)	Alternating Unaccusatives (AU)
aparecer / appear	ladrar / bark	bailar / dance	romper / break
llegar / arrive	acampar / camp	volar / fly	quemar / burn
venir / come	llorar / cry	saltar / jump	cerrar / close
entrar / enter	luchar / fight	marchar / march	cocer / cook
ir / go	reír / laugh	desfilar / parade	abrir / open
ocurrir / happen	fumar / smoke	correr / run	parar / stop

The purpose of the AJT, based on Montrul (1997)'s design, was to see whether the subjects accepted lexical causatives with the selected verb classes⁷. All the verbs included in Table 1 were tested in the lexical causative configuration. The verbs of manner-of-motion were tested first without PP, and later with a directional PP. A total of 30 test items and 15 filler sentences were used. Each item was accompanied by a picture to ensure the correct interpretation⁸. Subjects were asked to rate the sentences focusing on grammaticality in the target language, according to a seven-point Likert scale, from -3 (completely unacceptable) to +3 (completely acceptable). Examples of tested sentences are shown in Table 2, and an example of a test item is shown in Figure 1.

Table 2: Examples of tested sentences

Non-alternating unaccusatives (NAU)	*El padre <u>llegó</u> a la niña tarde a la escuela. *The father arrived the girl at school late.
Unergatives (E)	*Pedro <u>rió</u> a Juan. *Peter laughed John.
Manner-of-motion (M)	*El general <u>marchó</u> a los soldados. ??The general marched the soldiers.
Manner-of-motion with PP (M+PP)	*El general <u>marchó</u> a los soldados <u>al campamento</u> . The general <u>marched</u> the soldiers <u>to the camp</u> .
Alternating unaccusatives (AU)	Pedro <u>rompió</u> la ventana. Peter <u>broke</u> the window.

Figure 1: AJT test item (adapted from Montrul 2001b)

3.3 Group results

3.3.1 Verb classes across levels of proficiency

Figure 2 shows the acceptability means for all the verb classes in lexical causatives for the L1 English/L2 Spanish experimental and control groups. Refer to Table 2 for examples of test items. One-way ANOVAs were used to compare the means for each verb class across levels of proficiency. Alternating unaccusatives were correctly accepted by the learners, and there was no significant difference between them and the control group. As to verb classes that are not allowed in lexical causatives in Spanish (non-alternating unaccusatives, unergatives, manner-of-motion(+PP)), the general trend was that the means of acceptability were higher when the learners' level of proficiency was lower. There was a significant difference ($p < .05$) between the learner's means of acceptability and the control group's for all of these verb classes. Even though the learner's means were on the negative side of the scale, their rejection level was significantly lower than that of the native Spanish speakers⁹.

Among the different levels of proficiency within the experimental group, we found that beginners rated non-alternating unaccusatives significantly higher than the advanced learners ($p < .005$). No significant difference between levels of proficiency was found for unergatives and manner-of-motion (+PP). However, the learner's means for unergatives and manner-of-motion without PP are lower than the means for manner+PP.

Summarizing, although L1 English/L2 Spanish learners correctly accepted target-like lexical causatives with alternating unaccusatives, they consistently had significantly higher means than the control group for non target-like lexical causatives. The means of acceptability of lexical causatives that are not allowed in the L2 or in the L1 were higher among learners of lower proficiency.

Figure 2:

L1 English/L2 Spanish: Lexical causatives with all verb classes

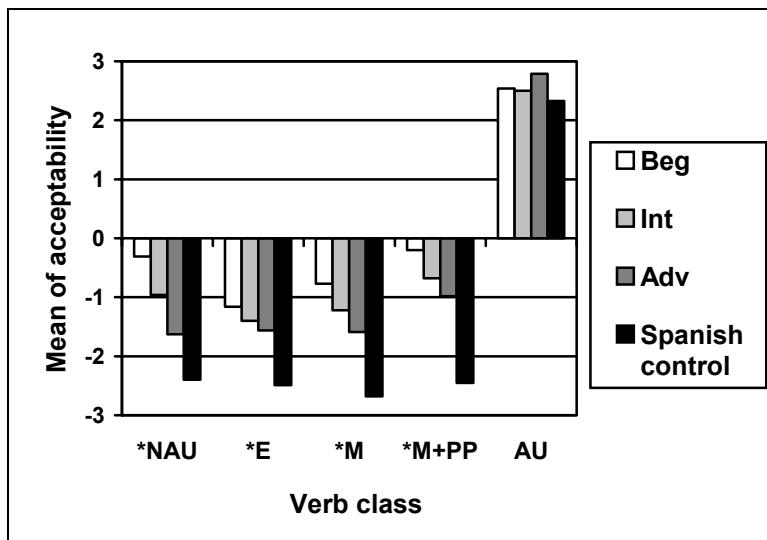


Figure 3 shows the L1 Spanish/L2 English experimental and control groups' acceptability means for all verb classes in lexical causatives. Using a One-Way ANOVA, we found no significant difference between learners and native English speakers for alternating unaccusatives. Learners correctly accepted these lexical causatives. As for manner-of-motion+PP, there was no significant difference between beginners and the control group. Intermediate and advanced learners' means for this verb class were significantly lower than that of the control group ($p < .05$).

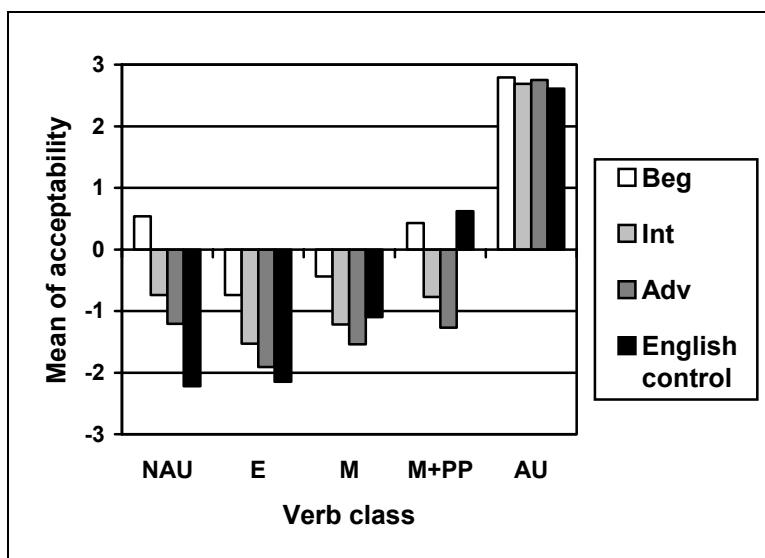
As for the verb classes that are unacceptable in lexical causatives in English, we found the following. Learners' means for non-alternating unaccusatives were significantly higher than the mean of the native English speakers (beginners: $p < .0001$; intermediates and advanced learners: $p < .05$). Beginners had the highest mean, which was significantly different from that of the advanced learners

($p < .0001$). For unergatives, the mean of the beginners was significantly higher than the mean of the advanced ($p < .05$) and the control group ($p < .0001$). Intermediate and advanced learners' means were not significantly different from the control group's mean. Learners correctly rejected manner-of-motion verbs without PP. However, although not significantly different, the beginners' mean was higher than those of the other levels and the control group. In fact, the L1 Spanish/L2 English group shows the same trend as the L1 English/L2 Spanish group, namely that the means for non-alternating unaccusatives, unergatives, and manner-of-motion(+PP) decrease as proficiency increases.

Summarizing, L1 Spanish/L2 English learners correctly accepted target-like lexical causatives with alternating unaccusatives, and rejected non target-like lexical causatives with manner-of-motion verbs without PP. However, with respect to manner-of-motion+PP, which are acceptable in the L2 but not in the L1, only the beginners were not significantly different from the native English speakers. This result is striking since it seems that, for this type of lexical causatives, as proficiency increases the learners' behavior is more consistent with their L1 than with the L2. In general, as was the case for the L1 English/L2 Spanish group, the means for lexical causatives with non-alternating unaccusatives, unergatives and manner-of-motion(+PP) were higher among participants at lower levels of proficiency.

Figure 3:

L1 Spanish/L2 English: Lexical causatives with all verb classes



3.3.2 Verb classes within levels of proficiency

In order to determine whether learners prefer some verb classes to others in lexical causatives, it is necessary to compare the different verb classes within each level. These means were already presented in the previous section, but in Figures 4 and 5 they are clustered according to proficiency level. Paired-sample t-tests were used to compare means.

Figure 4 shows the means for each verb class per proficiency level for the L1 English/L2 Spanish group. For the control group (native Spanish speakers), the mean of acceptability of alternating unaccusatives was significantly higher than the means for the rest of the verb classes ($p < .0001$). There were no significant differences between the means of non-alternating unaccusatives, unergatives, and manner-of-motion(+PP). All of them were equally rejected. These facts support our observations on the distribution of lexical causatives in Spanish (section 2.1).

All the levels of proficiency had a significantly higher means for alternating unaccusatives than the means for the other verb classes ($p < .0001$), which shows that learners distinguish between acceptable and unacceptable sentences in the L2.

Beginners had a significantly higher mean for non-alternating unaccusatives ($p < .005$) and manner-of-motion+PP ($p < .005$) than for unergatives. The means for the first two verb classes were also significantly higher than the mean for manner without PP ($p < .05$). Means for non-alternating unaccusatives and manner-of-motion+PP were not significantly different, and unergatives and manner without PP were not significantly different either.

Intermediate learners rated non-alternating unaccusatives ($p < .05$) and manner-of-motion+PP ($p < .005$) significantly higher than unergatives. There was a trend indicating that intermediates still prefer manner-of-motion+PP than without it ($p = .06$). Non-alternating unaccusatives and manner-of-motion+PP were not significantly different.

These facts show that beginners and intermediate learners preferred verbs that encode change of state/location (non-alternating unaccusatives) or verbs that appear in the context of a PP encoding change of location (manner-of-motion+PP) over those that do not (unergatives and manner without PP). Lexical causatives with verbs encoding change were treated similarly, and those with verbs that do not were also treated similarly. However, the preference for verbs that encode change is clearer in beginners than in intermediates. The latter were more willing to reject unacceptable lexical causatives.

Finally, advanced learners tended to reject all verb classes equally; however, they significantly preferred manner-of-motion+PP to non-alternating unaccusatives ($p < .05$) and to manner-of-motion without PP ($p < .05$). In other words, these learners do not show a preference for verb classes encoding change in general, but only in the case of manner-of-motion+PP, which is acceptable in English, their L1.

Figure 4:

L1 English/L2 Spanish: Lexical causatives with all verb classes

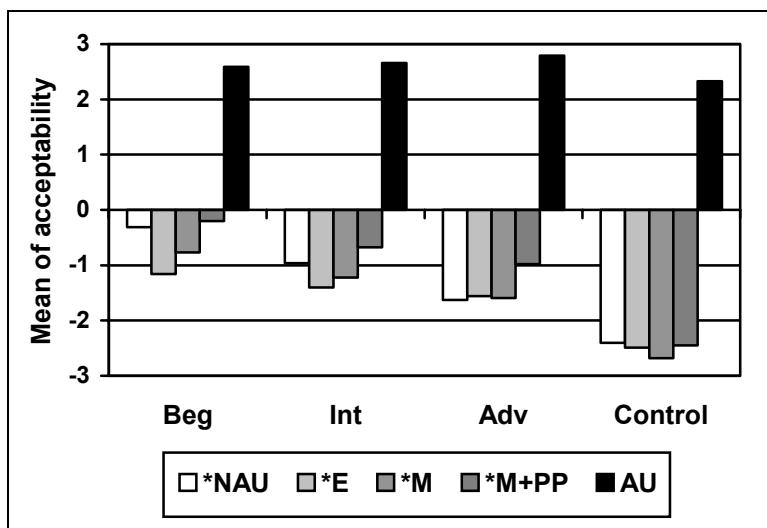


Figure 5 shows the means for each verb class by proficiency level for the L1 English/L2 Spanish group. For the group of English native speakers, the mean of acceptability of alternating unaccusatives was significantly higher than the means for other verb classes ($p < .0001$), even higher than the mean for manner-of-motion with a goal PP, which is also acceptable in the L1. Non-alternating unaccusatives and unergatives were equally rejected. The means of acceptability for manner(+PP) were significantly higher than those for non-alternating unaccusatives ($p < .0001$) and unergatives (M+PP: $p < .0001$; M: $p < .005$). The mean of acceptability of manner-of-motion+PP was significantly higher than the mean for manner without PP ($p < .0001$).

These facts partially support what is reported in the syntax literature about the distribution of lexical causatives with manner verbs in English (section 2.1). There is more variation in the means of acceptability for the individual verbs in this class than for alternating unaccusatives, which generated a significantly lower mean than the one for alternating unaccusatives¹⁰. The reported variation may be

related to the “low volitionality” requirement of the causee in lexical causatives (Goldberg 1995), i.e. no cognitive decision (or volitionality) can mediate between the causing event and the entailed motion. Manner verbs are basically unergatives, and as such their only argument is usually a volitional entity. Therefore, depending on how less volitional the causee can be conceptualized according to the action predicated by the verb, a manner verb would be more or less acceptable in a causative structure. On the other hand, as stated in note 3 in section 2.1, there is also variation with respect to verbs of manner without a PP, although the general trend is that this verb class is rejected in lexical causatives.

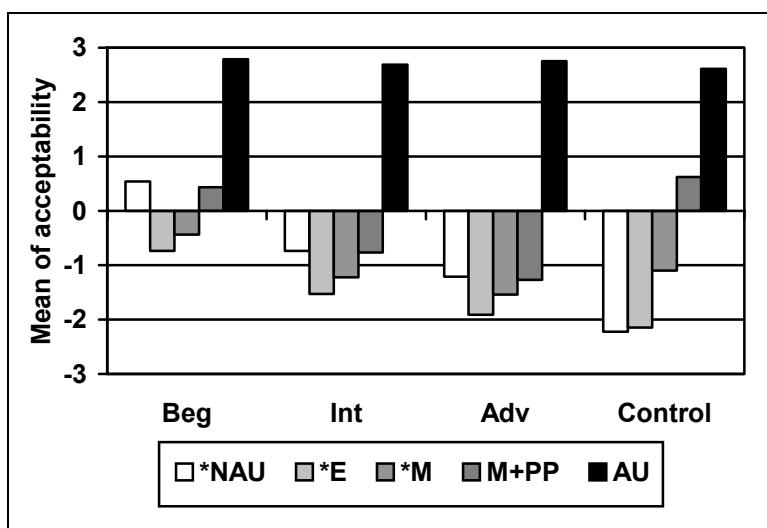
As for the learners, all levels of proficiency had a significantly higher mean for alternating unaccusatives than for the other verb classes ($p < .0001$), which shows that they distinguish between acceptable and unacceptable sentences in the L2.

Beginning and intermediate learners significantly preferred (or rejected to a lesser extent) non-alternating unaccusatives ($p < .005$, $p < .01$) and manner-of-motion+PP ($p < .01$, $p < .01$) to unergatives. The means for the first two were also significantly higher than the mean for manner without PP (NAU: $p < .005$, $p < .05$; M+PP: $p < .05$, $p < .05$). Means for non-alternating unaccusatives and manner-of-motion+PP were not significantly different. Unergatives and manner without PP were not significantly either. The L1 Spanish/L2 English group behaved very similarly to the L1 English/L2 Spanish group, namely both preferred verbs encoding change of state/location in lexical causatives.

Finally, advanced learners tended to reject all verb classes; however, they still significantly rejected more unergatives than non-alternating unaccusatives ($p < .05$) and manner-of-motion+PP ($p < .05$). Unlike the L1 English/L2 Spanish advanced learners, there was not a significant difference between non-alternating unaccusatives and manner-of-motion+PP, both of which are unacceptable in Spanish, their L1.

Figure 5:

L1 Spanish/L2 English: Lexical causatives with all verb classes



3.3.3 Generalizations

The results presented in sections 3.3.1 and 3.3.2 lead us to the following generalizations:

- (25) a. Generalization 1:
Both experimental groups behaved like their respective control groups at all levels of proficiency with alternating unaccusatives. This verb class was preferred to non-alternating unaccusatives, unergatives, and manner-of-motion(+PP).
- b. Generalization 2:
None of the proficiency groups in the L1 English/L2 Spanish group behaved like the

respective control group with regard to non-alternating unaccusatives, unergatives, and manner-of-motion(+PP). They rejected these verbs but to a significantly lesser extent than the control group.

In the L1 Spanish/L2 English, there was also a tendency to accept (or reject less) these verb classes, especially by the beginners.

c. Generalization 3:

Beginners and intermediate learners in both experimental groups preferred verbs encoding change of state/location (non-alternating unaccusatives and manner-of-motion+PP) over verbs that do not (unergatives and manner-of-motion without PP). Beginners treated verbs encoding change similarly. They also treated verbs that do not encode change similarly.

d. Generalization 4:

The experimental groups behaved differently at the advanced level of proficiency. The L1 English/L2 Spanish group rated manner-of-motion+PP significantly higher than non-alternating unaccusatives. The L1 Spanish/L2 English group rejected both equally. Besides, although both advanced groups rejected non-alternating unaccusatives, the L1 Spanish group still showed less rejection of this verb class to unergatives.

In the next section, we present our interpretation and analysis of the data, and discuss whether our hypothesis and predictions (cf. 23 and 24) were borne out.

4. Analysis and discussion

The generalizations presented above support our hypothesis and its corresponding predictions. Our central hypothesis was that the L1 properties determine which verb classes appear in lexical causatives in the interlanguage. If there is transfer of the *constructional properties* (cf. 20), both experimental groups were expected to accept non-alternating unaccusatives (e.g. *arrive/llegar*) and manner-of-motion+PP (e.g. *march/marchar+PP*) more than unergatives (e.g. *laugh/reír*) and manner-of-motion verbs without PP (e.g. *march/marchar*). This prediction was borne out for the beginning and intermediate levels of proficiency of both experimental groups (cf. 25c), but not for the advanced group (cf. 25d).

If there is transfer of *lexical specific properties* (cf. 21-22), both experimental groups were expected to reject non-alternating unaccusatives in lexical causatives (cf. 24a). However, the experimental groups were predicted to behave differently in that the L1 English/L2 Spanish group was expected to accept manner-of-motion+PP (*marchar+PP*) in lexical causatives (cf. 24b), while the L1 Spanish/L2 English group was expected to reject those verbs (*march+PP*) in that configuration (cf. 24c). These predictions held only for the advanced level of proficiency (cf. 25d) in both experimental groups, but not for beginning and intermediate learners (cf. 25c). It was found that, when recovering from the overgeneralization of causatives with non-alternating unaccusatives and unergatives, the L1 English advanced group still showed some preference for verbs of manner-of-motion+PP, while the L1 Spanish advanced group undergeneralized causatives with them. As for non-alternating unaccusatives, advanced learners in both experimental groups rejected them, as predicted. However, the L1 English group rejected this verb class and unergatives equally, which indicates that these learners make use of *lexical specific properties*, but also of the constraint that the *constructional properties* impose on unergatives.

We put forth the proposal that overgeneralization (and undergeneralization) of causatives can be reduced to transfer of different L1 properties at different levels of proficiency. At an earlier stage of acquisition, the L2 learner focuses on the properties of the construction (cf. 20), namely, a causative meaning can be associated with a transitive construction if it is licensed by a lexical item (verb or preposition) that encodes a change of state or location. English and Spanish are alike with respect to the general licensing of the construction. Therefore, L1 English/L2 Spanish learners, and L1 Spanish/L2 English learners behave similarly at this stage. More precisely, both groups of L2 learners accept more lexical causatives with verbs encoding change (non-alternating unaccusatives and manner-of-motion+PP), and reject to a higher extent lexical causatives with verbs that do not encode change (unergatives and verbs of manner-of-motion without a directional PP). It should be noted that the

beginner learners in the L1 Spanish/L2 English study were not significantly different from the English control group; however, clearly this result cannot mean that they have attained a native-like proficiency level. Beginner learners prefer lexical causatives with predicates encoding change, such as manner+PP, because they transfer their L1 constructional properties. Although not significantly different, the learners' and the native speakers' responses have different motivations.

At a later stage of acquisition, the L2 learner makes use of constructional and lexical-specific properties of the verb at the same time. As we mentioned in section 3.1, the lexical-specific properties preempt the constructional properties for non-alternating unaccusatives and manner-of-motion with a directional PP. Therefore, L1 English/L2 learners of Spanish and L1 Spanish/L2 learners of English will behave alike in some respects and differently in others. More precisely, both groups reject lexical causatives with non-alternating unaccusatives and unergatives, but the L1 English group still incorrectly prefers lexical causatives with verbs of manner-of-motion+PP while the L1 Spanish learners incorrectly rejects lexical causatives with them.

Our data raise some issues about the initial state of L2 acquisition, and recoverability from errors at advanced proficiency. Contrary to the FT/FA hypothesis (Schwartz and Sprouse 1994, 1996), it seems that the learners do not make use of all L1 properties at earlier stages of acquisition, but that different properties are transferred as proficiency increases. In our study, and also as pointed out by Montrul (1997, 1999, 2001a), if the L1 in its entirety were the initial L2 state, errors such as the overgeneralization of causatives with non-alternating unaccusatives and unergatives should not occur.

With respect to recoverability from these errors, White (1991) and Montrul (2001b) have proposed that undergeneralization is more difficult to overcome than overgeneralization, since in the former the L2 learner can rely on positive evidence. Similarly to the results in Montrul (2001b), our data shows that, for the L1 Spanish/L2 English group, as proficiency increases the learners make use of more L1 properties, which leads them to undergeneralize manner-of-motion+PP instead of accepting these target-like structures. It can be argued that, given the variability that we have found in the native English speakers' responses for this verb class, the nature of the input that English L2 learners receive in the classroom is not consistent enough to guarantee the acquisition of these structures, especially if this aspect of grammar is not explicitly taught. Another possibility is that these advanced learners were not advanced enough to have recovered from undergeneralization. Further research is necessary in order to see whether L2 learners eventually recover from these errors.

5. Conclusion

This paper argues that the phenomenon of overgeneralization of causatives in L2 acquisition can be reduced to transfer of different aspects of L1 knowledge. At earlier stages of L2 acquisition, the constructional meaning of lexical causatives seems to trigger the overgeneralization of causatives, in particular with verbs encoding change of state or location. However, at the advanced proficiency stage, when recovering from overgeneralization, L1 lexical specific constraints seem to be at play.

An argument that might be put forth against the transfer analysis of overgeneralized causatives is that the phenomenon also exists in L1 acquisition (Lord 1979, Bowerman 1982, Braine et al. 1990, Pinker 1989). Nevertheless, Bowerman (1996) shows that, in English child language, there is no preference for a specific verb class in overgeneralization (unaccusatives, unergatives, manner-of-motion, among others). We tend to think that overgeneralization of causatives in adult L2 and child L1 do not have entirely the same origin. It would seem that children that overgeneralize causatives associate freely a transitive structure with a causative meaning, irrespective of verb type. This would be akin to the purely syntactic strategy that some of the L2 learners resort to and which the individual analysis in Cabrera and Zubizarreta (2003a) revealed.

Finally, this paper demonstrates that research in L2 acquisition can shed light not only on the interlanguage grammar, but on the L1 grammar as well. The interlanguage data in our study show that change of state/location is a relevant semantic factor in the characterization of the verb classes that underlie the lexical causative construction in English and Spanish.

Notes

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1. Following a general assumption in the field of SLA, we use “interlanguage”, a term coined by Selinker (1972), to refer to the linguistic system (or grammar) that an adult learner create in the L2 acquisition process. Research on interlanguage grammars has found that these systems include features that cannot be traced back either to the learner’s L1 or L2. According to the Interlanguage Hypothesis, interlanguages are systematic at any given stage of L2 acquisition (Ritchie and Bathia 1996; Ellis 1997; Schwartz 1999; Gass and Selinker 2001; White 2003).

2. Although non-alternating unaccusatives are generally unacceptable in lexical causatives, there are some instances of causative uses of these verbs. Carson Schütze (p.c. April 2002) has provided us with the following example (uttered by an air traffic controller):

(i) We can arrive two planes an hour.

Also some native speakers of Spanish are more willing to accept examples like (ii) than examples like (iii):

(ii) ??Si María no llega a la clase, yo la llevo.

“If Maria does not arrive to class, I make her arrive.”

(iii) *Si María no se ríe, yo la río.

“If Maria does not laugh, I make her laugh.”

3. (8b) is acceptable in Spanish only with a locative interpretation, i.e. when change of location is not involved.

4. There is individual variation among native speakers of English as to acceptability of lexical causatives with verbs of manner-of-motion with a goal PP. Although for most speakers these sentences are acceptable, some consider them marginally acceptable. However, sentences in (10) are preferred to those in (12). On the other hand, for some speakers lexical causatives with manner-of-motion verb without a goal PP, i.e. (12), are also acceptable. It seems to us that these speakers reconstruct a goal PP when interpreting these sentences. Similar findings have also been reported by Montrul (2001b). We return to this issue in section 3.

5. This analysis is compatible with Talmy’s (1985) proposal on crosslinguistic differences on conflation patterns. In English, but not in Spanish, the semantic primitive manner can conflate with movement.

6. The reliability and effectiveness of the cloze test procedure as a measure of proficiency has been widely investigated, and results have varied across studies (for different points of view on cloze test, see Hanania and Shikhani 1986; Shanahan, Kamil and Tobin 1982; Fotos 1991; Oller and Jonz 1994; Brown 2002). As pointed out by an anonymous reviewer, using a cloze test as only measure of L2 proficiency is a limitation of the present study.

7. Verbs were tested in intransitive, lexical causative, and periphrastic causative configurations. In this paper, we report the results on lexical causatives only.

8. Thanks to Silvina Montrul for sharing with us her testing materials for our pilot study. For the picture design of this study, we thank Pierre Canueil and Mabel Amaya de Beas.

9. Many of the acceptability means for non-alternating unaccusatives, unergatives, and manner-of-motion (+PP) of the experimental groups have a value close to zero. This is the case because some learners rated these lexical causatives positively and others negatively, which generated the value of the mean to be close to zero. Due to lack of space, we do not present individual results in this paper (see Cabrera and Zubizarreta 2003b).

10. Individual means for manner verbs+PP are shown in parentheses: *dance* (-.67), *jump* (-.11), *run* (.33), *fly* (2.05), *march* (1.00), *parade* (1.11).

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