**Highlights**

**Can gestures help clarify the meaning of the Spanish marker 'se'?**

- 'Se', a Spanish marker is more frequent in Mexican than Peninsular Spanish speech.
- Gesture analysis provides additional information on the pragmatic functions of 'se'.
- The functionality of 'se' is similar in Mexican and Peninsular Spanish speech.
- Telicity is not highlighted in the gesture in ingesting verbs with 'se'.
- Gestures co-occurring with 'se' often stress the subject, rather than the object.

# Can gestures help clarify the meaning of the Spanish marker 'se'?

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1    **Can gestures help clarify the meaning of the Spanish marker 'se'?**

2    **Abstract**

3    Much has been written about the Spanish marker 'se' and its functions, the conclusions suggest

4    that aside from its function as a reflexive pronoun it is a pragmatic marker not following a

5    homogeneous structure (Azpiazu Torres, 2005; Aarón & Cacoullos Torres, 2006; Maldonado,

6    1999). We propose that additional information on the function of 'se' is provided by the hand

7    gestures co-occurring with 'se'. This paper adds to the existing body of knowledge by taking a

8    multimodal approach to investigate the uses of 'se' by two groups of speakers, one Spanish

9    and one Mexican, by adding gestures to the linguistic analysis.

10    Our results confirmed the various functions highlighted by linguistic analysis and point to the

11    importance of including the gesture when interpreting the various meanings of 'se'. In

12    particular we observed that in verbs like 'comer' or 'tragar' (to eat, to swallow), 'se + ingest'

13    is the preferred form, the gesture marking the subject, not the object. This is significant as

14    studies of 'se' indicate that its use is to provide a telic aspect to the action indicating the whole

15    object has been ingested (Sánchez López, 2002), yet the gesture highlights the subject. With

16    intransitive verbs, the gesture stresses or adds information related to the path or manner of the

17    action, suggesting that one of its main function is to energize the action, as suggested by

18    Maldonado (1999). Our results indicated that Mexicans are more likely to use the marker 'se'

19    but there were no differences in terms of functionality.

20    Keywords: se; gesture; Spanish.

21    **1. Introduction**

22    This study focuses on the hand gestures co-occurring with clauses containing the marker 'se',

23    one of the most used words in Spanish. Initially classified as a reflexive pronoun in structuralist

24    approaches, 'se' has been difficult to categorize as it can provide semantic, pragmatic and

25    syntactic meaning. ´Se´ can be used not only in reflexive sentences but also in impersonal,

26    passive and middle voices. It can be used with transitive and intransitive verbs with events and

27    non-events. Its use can also depend on dialectical variations and stylistic affect (Sánchez López,

28    2002), and on the aim of the speaker (Maldonado, 1999; Sanz & Laka, 2002; Torres Cacoullos

29    & Schwenter, 2008) which means that almost every case needs to be studied separately.

Hand gestures, movements of the hands and arms when we speak, help both the speaker to externalize the thought (a cognitive function) and the listener to access the message the speaker is externalizing (a communicative function). Gesture studies from both a communicative and a cognitive perspective leave no doubt as to the importance of gestures in the speech act (Goldin-Meadow, 2003; Gullberg, 2008; McNeill, 1999, 2015). From a communicative perspective, gestures can carry both content information and illocutionary force affecting the utterance (Kendon, 1995; Harrison, 2010; Müller, 2004; Streeck, 2008). Although the role of gestures in pragmatics is not clear (Payrató & Teβendorf, 2013), it is at least recognised and is being included in pragmatic studies (Cienki, 2017). Despite these findings, the study of gesture and speech together, to add to the linguistic mapping of language varieties is still lacking.

It has been suggested that 'se' specifies the pragmatic meaning of the clause by adding transitive value to it, clarifying the aspect of the verb (Azpiazu Torres, 2005; Clements, 2006; Maldonado, 1999). If this is the case, we hypothesize that the gesture will also reflect this meaning. Therefore, by studying the gesture it should be possible to confirm the function and pragmatic meaning of the marker. This study focuses on two varieties of Spanish, American (Mexican) and Peninsular (Andalusian). Eighteen speakers (50% Mexican, 50% Spanish) narrated the same story, based on a video cartoon. Their speech and gestures were transcribed and the utterances with 'se' analyzed following a mostly qualitative approach to identify potential patterns in the use of 'se' + gesture. The objective of the study was to identify whether gestures co-occurring with utterances containing 'se' were providing additional information to help clarify the speakers' intended function of the marker 'se'. A secondary objective was to identify whether there were any obvious differences, in the use of the marker and the gestures co-occurring with it, between Spanish and Mexican speakers.

## 2. Gestures

Speakers gesture when they talk, the rate and form of the gesture and its synchronicity with speech varying from speaker to speaker. Similarities have been found related to the culture and language of the speakers (Kita, 2009), the topic, the cognitive load on the speaker (Goldin-Meadow, 2003) and the attention of the addressee (Iverson & Goldin-Meadow, 1998, 2001). Gestures can play a communicative function (for the benefit of the interlocutor) (Kendon, 2004, Harrison, 2010) but also a cognitive function (for the benefit of the speaker) (Goldin-Meadow, 2003; McNeill, 1992, 2015).

This study focuses on representational gestures that have a primarily communicative function (Mittelberg & Evola, 2014). These are gestures that present iconic or metaphoric resemblances to the content of the speech, including those used to point –deictics. Gesture classification often follows the work of McNeill (1992), grounded on prior classifications by Efron (1941) and Ekman and Friesen (1969), based on body movement meaning and function. Ekman and Friesen (1969) categorized communicative body movements into: emblems, movements that have been codified by certain societies and carry meaning without words (such as the victory sign); illustrators, reinforcing verbal communication; affect displays, communicating affect or emotional states; regulators, used to manage interactions; and adaptors, to answer physical or context related requirements. McNeill focused on hand and arm movements setting them up along a continuum according to the relationship between the hand/arm movement and speech. At one end of the continuum, we find sign language, codified hand movements that do not need speech to be understood, followed by mime and emblems. Further along the continuum are the hand movements referred to as gestures per se (Ekman and Friesen's illustrators and regulators). These are used together with speech in the communicative act but are not codified by any one culture, so they have no clear specific meaning if seen without speech or out of context. If they do not refer to the content of the speech they are termed non-representational. These are mostly pragmatic gestures that can be used to emphasize, keep the rhythm of the speech, refer to the interlocutor, manage the turn, indicate request, negation or other illocutionary meanings (Kendon, 2004) (for a summary of other types of classifications please refer to Bohle, 2014). A gesture phrase can have various phases, from the rest position to the stroke and back to rest, with holds in between each phase. Most of the content of the gesture is carried in the stroke, which is often synchronous in time with the speech unit carrying the related content.

Speakers of different languages conceptualize events differently, as explained by the *Thinking for Speaking* hypothesis, or TFS (Slobin, 1996). It has been observed that the typology of the language is often mirrored in the gesture (McNeill & Duncan, 2000; Stam, 2006, 2015), reflecting the TFS of the speakers (Slobin, 1996). TFS suggests that speakers are conditioned in what they say and how they say it by linguistic choices. Therefore, language typologies can also be used to describe how the gesture is used to communicate. Gesture studies have shown how gesture reflects language characteristics such as the subject (S), verb (V), object (O) order (Futrell, Hickey, Lee, Lim, Luchkina & Gibson, 2015) or how information provided by the

94    gesture mirrors that encoded in the verb, usually manner or path (Alibali, Kita & Young, 2000;

95    Slobin, 2016; Stam, 2006, 2017).

96        Gestures have also been found to disambiguate utterances with more than one meaning,

97    adding information of a prosodic nature (Guellaï, Langus & Nespor, 2014; Loehr, 2013; Prieto,

98    Borràs-Comes, Tubau & Espinal, 2013). In addition, other pragmatic functions are often

99    reflected in both representational and non-representational gestures. For example, anaphoric

100   functions are communicated by deictic (pointing) gestures (Gullberg, 2003), and negations with

101   negative gestures (Kendon, 2004). These pragmatic meanings, sometimes given by the gesture

102   alone, have also been the focus of much recent research (Bresem & Müller, 2013; Kendon,

103   2017; Mittelberg, 2017; Payrató & Teβendorf, 2013; Ladewig, 2013; Wehling, 2017).

104   Pragmatic gestures can often be categorized into families depending on their functionality

105   (based on the work by Kendon, 2004) and their shape, in cases of somewhat conventionalized

106   gestures (Ladewig, 2013). Bearing in mind the strong relationship between gesture and speech

107   it would be logical to turn to the gesture to disambiguate potential functional confusions, such

108   as the ones 'se' can cause.

109   **3.  Se**

110   The marker 'se' is the ninth most frequent word in Spanish (Davis, 2002), semantically

111   associated with over twelve functions (Montes Giraldo, 2003). 'Se' can mark reflexivity and

112   reciprocity, middle, passive and impersonal voices, and it also has non-anaphoric functions

113   (Clements, 2006). These uses have been acquired over centuries, the later stages of Latin

114   already showed impersonal and passive functions for 'se' (Bogard, 2006), as well as the

115   reflexive function and those related to the middle voice (between passive and active voices).

116   'Se' with middle voice verbs, mostly intransitive, led to its pronominalization and subsequent

117   increase in their frequency (levantarse (to get up), acostarse (to go to bed)). Eventually, 'se'

118   was also added to frequently used verbs relating to movement and changes in state (Sánchez

119   López, 2002). From there on, the referential meaning of the 'se + verb' begins to change,

120   gaining in subjectivity based on the level of involvement of the speaker (Traugott, 1995) and

121   the relationship of the subject and the object (Maldonado, 1999). These changes lead to new

122   meanings of the marked version 'se + verb' versus the unmarked use, such as dormir (to sleep)

123   and dormirse (to go to sleep). Differences in the frequency of 'se' in the various varieties of

124   Spanish have been noted, in particular between Mexican and Peninsular Spanish speakers, with

125   the non-reflexive 'se' being more frequent among the former (Aarón and Torres Cacoullos,

126    2006); however it is not clear whether this is a grammatical/lexical difference or a pragmatic

127    one.

*3.1 Functions*

129    Formalists consider 'se' as a mostly reflexive marker with various sub-functions –direct,

130    external, dative, reciprocal– (Montes Giraldo, 2003). Other functions occur when the 'se'

131    substitutes the subject; then, the sentence is regarded as impersonal, or if it is used next to a

132    direct object acting as the notional subject, making it a passive sentence. However, it is the

133    other uses that raise much discussion as there seems to be little regularity as to their occurrence.

134    Some functionalists argue that the use of 'se' is determined by the transitivity position of the

135    verb in a continuum (de Miguel, 1992; Zagona, 1996), while others defend that 'se' determines

136    that position (Sanz & Laka, 2002).  Thus, transitivity is not seen as a binary concept but as one

137    that can be mapped along a continuum (Clements, 2006; Hopper & Thompson, 1980). This

138    position changes for intransitive verbs when 'se' is added, as 'se' opposes the level of

139    transitivity of the verb, adding transitivity (Azpiazu Torres, 2005; Clements, 2006). The marker

140    can provide additional information related to some element of the transitivity of the verb,

141    aspect, kinesis, volitionally, mode, agency, punctuality or affectedness of the object (Hopper

142    & Thompson, 1980). Nevertheless, identifying the exact additional meaning added by the

143    marker is not always easy for the listener, especially as in some cases, both the marked and

144    unmarked forms seem to be used interchangeably:

145            (1) Ir(se) / venir(se) (go / come)

146    while in other cases only one of the forms is accepted:

147            (2) Salir(se) / entrar (se*) (exit / enter)

148    or both forms are valid but with different meanings (depending on the dialect):

149            (3) Quedar / quedarse (to arrange to meet / to stay)

150    sometimes, with the same verb, the marked form is valid, others it is not:

151            (4) a. Se comió la paella (S/he ate the paella)

152                    b. Comió paella (S/he ate paella)

153        c. * Se comió paella (S/he ate paella)

154        (Examples from Sánchez López, 2002)

155  *3.1.1 Telicity*

156  One of the nuances added by 'se' is that of aspect (Sanz & Laka, 2002). Even in transitive verbs

157  the marker can add telicity to the action. In Example 4 the verb 'comer' (to eat) is an

158  ambitransitive verb that if used with the marker 'se' is transitive, needing a direct object (DO)

159  preceded by a determinant. The determinant article specifies the object is a full entity affected

160  in its entirety by the action; therefore, the action can be assumed to be complete. Verbs of this

161  type are referred to as ingesting verbs (Babcok, 1970) or incorporative verbs (Arce Arenales,

162  1989) as the subject is taking something for itself. The unmarked verb in Example 4b refers to

163  the type of food eaten but not to a specific meal, as such 'se' would not be appropriate, as the

164  subject could not eat the entire stock of that food-type.

165  *3.1.2 Change of state*

166  On the other hand, Examples 1 to 3 are all intransitive verbs related to movement. In marked

167  intransitive verbs 'se' interferes heavily with the intransitive value. The marked forms indicate

168  completed actions, at a specific time, but the focus is a change of state. In these cases where

169  the marker modifies the aspect, the 'se' is expletive. According to Maldonado (1999) it is

170  possible to identify a specific point at which the state changes, an origin or an end point.  These

171  forms are normally used with non-present tenses to indicate a completed action. If used with

172  the present tense, they acquire an additional meaning of a habitual action or the immediate

173  future. Sánchez López (2002) indicates that 'se' can also be used with intransitive verbs

174  denoting transition between two points ('irse', 'caerse' - to go, to fall), but not with those

175  referring to just one starting or ending point ('nacer', 'llegar' - to be born, to arrive) or

176  specifying the end of a process ('hervir' - to boil).

177  *3.1.3 External or unexpected forces*

178  Azpiazu Torres (2005) proposes an additional classification of the marker related to the cause

179  of the event, whether natural and expected or not:

180        (5) a. Salió de la carretera S/he left the road (maybe to park the car)

181                b. Se salió de la carretera S/he left the road (something unexpected happened

182                    that made her/him leave the road) (p. 14)

183      In Example 5b the agent has lost control of the action. The event takes place against the

184      expectations of the speaker, thanks to or caused by an external force (the concept of *Force*

185      *dynamics*, Talmy, 1988). According to Aarón and Torres Cacoullos (2006), utterances like

186      Example 5b will show a high level of subjectivity that has structural implications, not only by

187      the addition of the marker but also by a preference to use more dative pronouns, having a closer

188      involvement with the event –indicated by the use of first and second person pronouns– and

189      using more subjective tenses. The meaning is created through this subjective viewpoint to the

190      utterance (Traugott & Dasher, 2002). Therefore, 'se' not only provides aspectual information

191      but also pragmatic (involvement, counter-expectation) (Torres Cacoullos & Schwenter, 2008).

192      *3.1.1 Energizing the verb*

193      From a functionalist cognitive viewpoint, Maldonado (1999) argues for the pragmatic meaning

194      of 'se', as it reflects the views of the speaker. He proposes a classification of 'se' based on its

195      use with middle voices, utterances where the differentiation between subject and direct object

196      is low. The use of 'se' as a middle voice is used in utterances that are neither transitive

197      (dynamic, with energy), nor zero-energy absolute prepositions. The various functions of 'se'

198      are related to the distance, linguistic or objective, between the subject and the dative case (the

199      noun to which something is given, which can be either the indirect or direct object). With

200      objective increase in distance from the body out (body, clothes, other objects in the

201      environment), the use of 'se' as a direct or indirect object will indicate the degree of energy, or

202      activation, the dative receives. In 'se levanta', 'se viste' (s/he gets up, gets dressed) the 'se'

203      indicates a primary point of reference, while in 'se la come' (s/he eats it), the 'se' acts as an

204      indirect object and the domain of the subject is seen as a secondary reference point.

205      Linguistically the distance is marked by the degree of involvement and benefit the subject

206      derives from the action. The most dynamic verbs are those that provide more detailed

207      information about the path or manner of the action. 'Se' emphasizes the change of state of the

208      events: it energizes it, both physically or metaphysically.

209      Identifying the specific meaning of the marker is not always obvious just from the

210      speech (or its transcription). However, we propose that adding gesture to the analysis will aid

211      the correct interpretation of the pragmatic nuance added by 'se'.

## 4. Methodology

The main objective of this study was to confirm whether the gesture helped clarify the meaning added by the marker 'se'. A secondary objective was to assess whether any specific differences in the functionality or frequency of the marker could be identified in speakers of different varieties of Spanish, in particular Spanish and Mexican. As this was a resource intensive analysis, the sample of participants had to be limited to nine participants from each group.

### 4.1. Participants

This study used convenience sampling as it relied on data from previous projects. The corpus was comprised of extracts from oral texts from nine Mexicans (living in the US) and nine Spaniards (living in Spain) narrating the same story. The Mexican data was collected by Prof. Gale Stam at National Louis University in the US for a series of projects investigating Thinking for Speaking (2006) and how the representation of path changes with proficiency (2015, 2017). From the original 17 Mexican recordings provided by Prof. Stam, the nine with the lowest English proficiency speakers were selected to match the 9 Spanish participants collected in Spain, the total number of Spanish volunteers. By selecting the lower proficiency speakers, we sought to minimise the interference of the English L2 in the Mexican speakers. Mexican participants were a very heterogeneous group, from various states in Mexico. Although they had been in the US for at least a year at the time of the study, they spoke Spanish 60% of the time or more. Their average age was 26 and they were all enrolled at a university in the US to study English, having already completed tertiary studies in Mexico (save for three who had only completed high school there). Two (22%) were male. Spaniards were all students at a university in Spain, born and educated in Spain, speaking Andalusian, the variety of Spanish closest to the American variety (Penny, 2000). Their average age was 22 and 44% were male (see Appendix 1 for more details). Participants had answered calls for volunteers. All participants had volunteered to provide speech samples for research purposes. The data collected has also been used in other studies (Stam, 2006, 2015, 2017).

### 4.2. Procedure

The participants were shown a video of an episode of the *Tweety and Sylvester* stories (a television cartoon) and were asked to narrate it. In order to relate this study to existing gesture studies (McNeill & Duncan, 2000), the *Canary Row* episode (Freleng, 1950) was chosen. This

study focused on an extract, halfway through the episode, where Sylvester (a cat) is trying to capture and eat Tweety, a bird living with his owner (Granny). In this extract, Sylvester climbs inside a drainpipe to get to Tweety's flat, but Tweety sees him and throws a bowling ball inside the pipe. Sylvester swallows it and exits the pipe, rolling down the street to a bowling alley. This extract was chosen as most participants made detailed reference to it and its description allows for the use of many marked and unmarked verbs.

The participants were required to watch the cartoon and then recount the story with as much detail as possible. In the case of Mexican participants, they recounted the story to a Spanish speaking listener who had not seen the cartoon. A researcher was also present and prompted for more information if necessary. Spanish participants addressed a Spanish listener (the researcher) who did not interrupt the narration.

Participants were informed that the sessions were being video-recorded and their consent to use the recordings for research purposes was collected. Participants were not aware that gestures were a focus of the study. The speech in the recordings was transcribed using *Praat* (a transcribing software tool) and *ELAN* (a multi-media transcribing tool) was used to transcribe the gestures. ELAN was used to identify the exact start and end point of the phases of the gestural phrases, in particular the strokes and their synchronicity with the co-occurring speech units. The transcriptions were checked by an assistant researcher and all discrepancies discussed (these observations are included in the results).

*4.3. Analysis*

A mostly qualitative analysis was carried out to assess the meaning of representational gestures in the description of physical actions (most movement related). A basic quantitative analysis was also carried out to identify the number of 'se' occurrences and of gestures in 'se' clauses observed in each group of participants. The episode narrated was first divided into five distinct events (see Table 1). Many of the verbs used were intransitive and could be marked with 'se' if the speaker chose to do so. Each transcription was checked for its referent to these five events and the most common verbs used noted (see Table 1). The transcriptions where then analysed looking for instances where the marker 'se' had been used. The transcriptions were checked by four native Spanish speakers, unrelated to this project (two Mexicans and two Spanish). They identified whether the 'se' was necessary in the texts, obtaining 100% consensus. The various

272 markers were then classified depending on their relationship to the verb (transitive/intransitive)
273 and their function (reflexive, impersonal, passive).

274       This study focused on marked physical motion verbs and on the representational
275 gestures accompanying them, synchronous in time with the verb itself or with other the
276 elements of the predicate, such as the marker 'se'. This type of verbs were chosen as the
277 representational gestures co-occurring with them, indicating path or manner of motion, have
278 been widely studied in Spanish (Cadierno & Ruiz, 2006; Negueruela, Lantold, Jordan &
279 Gelabert, 2004; Stam, 2015, 2017). On the other hand, these are also verbs that often accept
280 the use of the marker 'se'. Unmarked verbs that could be used with a 'se' were also noted and
281 the gestures co-occurring with them described and interpreted to identify their relationship with
282 the speech. Representational gestures included iconic, metaphoric and deictic gestures that
283 illustrated the content of the speech or made direct reference to it. As the gesture stroke
284 (annotated as <u>underlined</u>) is not always exactly synchronous in time with the verbal unit it is
285 most closely related to, we identified the whole of the gestural phrase (annotated as […]) within
286 which the action verb was contained. We have provided photographs of selected gestures under
287 Appendix 2. Each researcher also noted a full qualitative description of the strokes with the
288 interpreted meanings, achieving inter-rater agreement of 93% over all the gestures after
289 discussion, in some instances not fully agreeing on the function of the gesture –see Example
290 10– in others on the meaning –see Examples 13 and 15.

291 **5.  Results and Discussion**

292 The narrations were divided into five distinct events (in brackets the most common verbs used
293 in Spanish): the cat climbing ('subir' - to go up) inside ('meterse' - to go inside) the drainpipe,
294 the bird throwing the ball down the drain ('echar' - to throw), the cat swallowing the ball
295 ('tragarse' - to swallow), the cat exiting the pipe ('salir' - to exit) and the cat rolling ('ir' - to
296 go) to the bowling alley, see Table 1. In terms of the speech description of the events, the two
297 groups were quite similar, recounting an average of 4 events per Mexican participant and 3.7
298 per Spanish participant. The most frequently recalled event was that of the bird throwing down
299 the ball (mentioned in all cases) and the least the cat exiting the pipe (recounted by 4 Mexican
300 participants and 3 Spaniards).

301       In total, there were 51 cases of the use of 'se' among Mexicans (7.7% of 663 words)
302 and 23 among Spaniards (4% of 566 words), this difference is significant (chi-square = 6.9292,

303 p-value = 0.00848, significant at p < .01). When excluding half words, repetitions, impersonal

304 uses of 'se' and utterances not referring to the events analyzed, we were left with 26 and 15

305 instances respectively, see Table 1.

306 Insert Table 1 here.

307 Aside from the verbs mentioned above, in both the Mexicans and Spaniards' speech

308 there were instances of the use of 'se' in impersonal sentences: 'se ve que…" (it is seen that)

309 and 'se entiende que…(it is understood that). There were also four cases (two in each group)

310 of the expression 'se da cuenta' (he realizes). These cases were not included in the analysis as

311 they did not refer to physical movements.

312 We observed that in Mexicans half of the verbs analyzed describing physical actions

313 were marked (51% out of 51), while in Spaniards a third (33% out of 45) were. Aarón and

314 Torres Cacoullos (2006) observed that the frequency of the use of 'se' among Mexicans was

315 higher than for Spaniards, in cases where both the marked and unmarked versions were

316 possible. Our corpus supports their findings, with 65% of optional marked verbs among

317 Mexicans (out of 26) and 53% in Spaniards (out of 15).

318 We observed the co-occurrence of the gesture with all the necessary and un-necessary

319 uses of 'se'. Counting any phase of the gestural phrase (including holds and returns), Mexicans

320 gestured with most occurrences of 'se' (90% of 26 utterances of 'se') just as Spaniards, who

321 gestured slightly more with 'se' (93% of 15 utterances of 'se'). The stroke of representational

322 gestures occurred with the marker in 56% of Mexicans' 'se' and in 57% of Spanish's 'se'

323 (seldom starting at exactly the same time).

324 When the objective of the gesture is to enhance communication (rather than to aid in

325 the thinking process), it is thought that the gesture is used by the speaker to make part of the

326 utterance salient (McNeill, 2015). In instances of 'se' being diathetic or expletive, its effect is

327 also to make the action salient by energizing it or by marking its unexpectedness (Azpiazu

328 Torres, 2005; Torres Cacoullos & Schwenter, 2008; Maldonado, 1999). Therefore, finding that

329 the most uses of 'se' are accompanied by gestures is within expectations, as both the marker

330 and the gesture are likely to be fulfilling some linguistic function, be it pragmatic, semantic or

331 syntactic by adding the speakers' subjective attitude to the events.

11

As our objective was to identify whether the gesture was clarifying the function of the marker 'se', a detailed analysis of the gestures was carried out (please refer to Appendix 2 for photographs of selected gestures). The next sections describe various marked and unmarked utterances and the gestures accompanying them. As all participants were narrating the same episode, we observed many repetitions in the gestures. The utterances selected provide examples of most of the gestures observed.

*5.1 The cat goes inside the drainpipe ('meterse')*

In the first event narrated, the cat enters the drainpipe. In five of the narrations we find the use of the verb 'meterse' (to go inside), in its marked pronominal form, three in the Mexican group and two in the Spanish group (who also use the verb 'colarse', to sneak in). Analyzing the gestures, we find them co-occurring with all utterances but one of 'se + meter'. We have chosen three examples: the first two present a similar gesture from both a Mexican and a Spaniard to show how the cat went inside and up the pipe, and the third (from a Spaniard) shows a more unusual gesture describing how the cat crawls in. In all these cases, 'se' is acting as a reflexive pronoun, grammatically necessary to mean the cat (himself) 'goes inside'.

Example 1 (participant: Mexican7)

Spanish original:      El gato [se mete <u>por el medio de la</u> tubería]

Gestures:                                    [Gesture 1]

Literal transcription:  The cat [*se* goes-in <u>through the middle of the</u> drainpipe]

Translation:            The cat goes inside the drainpipe

Transcription of Gesture 1 (G1): Hands start from rest position at lap, both arms move up and outwards to the sides, right hand (RH) palm up fingers together moves up and left toward the left hand (LH) which is facing in to receive the right hand (please refer to Appendix 2 for a photograph of the gesture).

In Example 1, the gesture indicates that the cat is moving into and up the pipe, information not conveyed in the speech. The marker is part of the preparation of the gesture but not part of the actual stroke.

Example 2 (Spanish9)

Silvestre [coge y se mete <u>por el canalón</u>]

[G2]

362        Sylvester [takes and *se* goes-in <u>through the drainpipe</u>]

363        Sylvester goes inside through the drainpipe

364        G2: Both hands are clasped together, left over right, at neck level. The left opens and

365        the right is pulled away to come back to the left which half covers it. Indicating the

366        inserting something into a confined space.

367   Here, grammatically 'se' fulfills the same function as in Example 1, and again the 'se' is part

368   of the gesture but not part of the stroke. This is not always the case, as in the following

369   example:

370   Example 3 (Spanish3)

371        [En tercer lugar <u>se mete</u> en- [<u>a través de la tubería va</u> es]]calando

372              [G3a]         [G3b]

373        [In third place *se* he-goes-in in- [<u>through the drainpipe goes</u> clim]]bing

374        Thirdly he gets inside and climbs the drainpipe

375        G3a and b: Right hand lifts from lap to stomach, palm facing in, fingers extended

376        sideways, wrist flexes in and out slowly and in G3b the same movement is seen but the

377        arm is also lifted.

378   Once more, in Example 3 we find 'se' as a reflexive pronoun, but this time the gesture seems

379   to give information about the manner the cat gets inside the pipe (wriggling in, not depicted in

380   the video). Examples 1 to 3 all use 'se' as a reflexive pronoun, necessary in the utterances, but

381   the gesture does not always co-occur with it. We expected the gesture to reference the cat, the

382   figure, as the 'se' indicates the subject is also the object of the action. However, the gesture

383   refers to a specific aspect of the verb, the manner or the path. In these examples, the marker is

384   a necessary syntactical element integrated with the verb, forming a unit, and there is no need

385   to emphasize the meaning it adds (the cat himself). Instead, speakers choose to focus on the

386   salient content, how the cat gets in, which explains why the stroke of the gesture does not

387   always co-occur with the marker-verb group. In these examples, the marker, syntactically

388   necessary, is not made salient through the stroke of the gesture.

389   *5.2 The cat climbs up the drainpipe ('subir' and 'subirse')*

390   The description of the cat climbing the drainpipe, also part of the first event, provides additional

391   information as to what the cat does inside the pipe. The verb 'subir' was analyzed as it takes

392  both the marked and unmarked forms. Six Spaniards (one marked form) and three Mexicans
393  (two marked forms) use the verb 'subir' (to go up) to describe the action. The examples below
394  provide descriptions of two similar cases of a marked 'subir' (one from a Mexican and one
395  from a Spaniard), where the gesture focuses on the action of 'moving upwards'. The other three
396  examples are of unmarked 'subir', showing two similar gestures (one from a Mexican and one
397  from a Spaniard) and a third one not related to the action itself but to the fact that this is
398  Sylvester's second attempt to get to Tweety.

399  Example 4 (Mexican1) 'subirse'/ 'ir subiéndose'
400      Y cua[ndo se va subiendo]
401          [G4]
402      And whe[n *se* going up]
403      And when he is going-up
404      G4: palms facing, fingers pointing out and slightly bent inwards, hands move up and
405      down. Both hands represent climbing up a vertical pipe. 'Se' is part of the stroke.
406

407  Although the speaker uses a verbal phrase with the verb to go + to go up, "va subiendo", we
408  have elected to include the example under this section. The verb 'to go' focuses on the
409  progressive aspect of an action that is about to be interrupted, with a similar meaning to 'está
410  subiendo' (he is going up), rather than the action of 'going' nuanced by the direction (up). The
411  semantic meaning of the action is given by the verb 'to go up' ("subiendo").

412  Example 5 (Spanish9) 'subirse'
413      La tercera vez [en vez de subirse [agarrado al cana]]lón
414          [G5a]                [G5b]
415      The third time [instead of going-up *se* [holding-onto the drain]]pipe
416      The third time instead of going up holding the drainpipe
417      G5a: LH moves up from the elbow as the fist closes.
418      G5b: RH joins LH, palms facing, fingers pointing out and slightly bent inwards. Both
419      hands as if holding the drainpipe.

420  In the above two examples we observe that the salient part, highlighted by both hands, is how
421  the cat is climbing up (on the outside of the pipe, despite the fact that the cat is climbing inside
422  the pipe), the manner of the verb. In both cases, speakers take on the role of the cat and recreate
423  his movements, in Example 4 the marker co-occurs with that gesture. In Example 5 the 'se' is

14

424 observed with a previous gesture indicating path. In both cases, the gesture is referring to the
425 action of climbing in progress. This suggests that the speaker's intention is not to mark the
426 telicity of the action (the subject reaching the top) or a change of state (from being at the top to
427 being at the top), neither is it highlighting an external force (the speakers recreate the actions
428 of the cat climbing by himself). Therefore, it would seem that the main function of the marker
429 is to infuse the action with energy (Maldonado, 1999).

430 These gestures contrast with those observed during the unmarked utterances. Out of the
431 six examples of the unmarked 'subir' utterances, two had no gesture (Spaniards); in another,
432 the gesture referred to the repetition of the action and the others seem to be referring to the size
433 or shape of the pipe rather than to the manner of the action. In none of these cases is the manner
434 of the climbing highlighted.

435 Example 6 (Mexican3)
436     Entonces [subió] por un tubo de agua
437         [G6]
438     Then [he-went-up] through a pipe of water
439     Then he went up a water-pipe
440     G6: both hands up from lap, index fingers and thumbs from each hand facing each other,
441         with a slight movement upwards. The gesture indicating the diameter of the pipe and
442         the upwards motion.

443 Example 7 (Spanish7)
444     [la tercera vez intenta subir- subir [por el tubo…]
445         [G7a]                 [G7b]
446     [the third time he-tries to-climb-up to-climb-up [through the drainpipe…]
447     the third time he tries to climb up through the pipe
448     G7a: RH thumb and index extended, illustrated the diameter of the pipe, the hand moves
449         at the wrist back and forth.
450     G7b: RH, same position as before, flexes at the wrist back and forth moving down and
451         then left and upwards indicating path.

452 Example 8 (Spanish 8)
453     […vuelve a subir por la] tubería
454     [G8]
455     […return to go-up through the] drainpipe

15

456        he goes up the drainpipe again

457        G8: LH index and thumb extended facing right, circle around the right index, also

458    extended facing left, indicating 'again'.

459    Comparing the marked and unmarked cases, we could say that there is more 'energy' in the

460    gesture of the marked cases, providing additional information as to the manner of the action.

461    Azpiazu Torres (2005) explains that the use of the marker is a case of pronominalization of an

462    intransitive verb, the purpose being to add expressivity to the utterance. An explanation

463    following that of Maldonado (1999) who argued that 'se' energizes the action, making the verb

464    more dynamic by providing information about its path or manner. The analysis of the gesture

465    in these examples of the marked verb 'subir' points to Maldonado (1999) and Azpiazu Torres'

466    (2005) theories of energizing the verb rather than to a transition between two points or a

467    finished action. The gestures of both Mexicans and Spaniards follow the same pattern.

468    *5.3 The bird throws the ball down the drainpipe ('meter' as a transitive verb)*

469    In this event the main verbs used to describe the ball being inserted or thrown down the pipe

470    were 'meter', 'lanzar', 'poner', 'aventar', 'introducir', 'echar', tirar'. Mexicans use a wider

471    range of synonyms for this action than Spaniards, who prefer either 'echar' or 'tirar' (see Table

472    1).  Both groups of speakers use the verb 'meter' (to put inside), and other verbs, in their

473    unmarked form. These are all ditransitive and ambitransitive verbs that can accept direct and

474    indirect objects, in this case usually 'the ball' and "into the cat" respectively. As can be seen,

475    when referring back to Examples 1-5 (Section 5.1), the meaning of the verb 'meter' changes

476    depending on whether it is a marked or unmarked form. As well as the marked form, 'meter'

477    accepts pronominalizations of the direct and indirect objects, which means that 'se' can also be

478    used as an indirect object pronoun: 'se mete la bola' could mean either 'the ball enters (itself)',

479    if 'meter' is marked, or 'he puts the ball inside' in the unmarked case. The versatility of 'se'

480    can lead to alternative interpretations of the same utterance; this is where the analysis of the

481    gesture can obviously clarify the meaning of the speech. In Example 9, Mexican participant 1

482    is describing throwing the ball down. She repeats what seems to be similar information in 9(a)

483    and 9(b):

484    Example 9 (Mexican1)

485        9(a) Y le mete una bola

486            And in him inserts a ball

487            And (Tweety) inserts a ball

488         9(b) Se la mete dentro de la boca

489            *Se* it inserts inside of the mouth

490            He (Tweety) inserts it (the ball) inside his (Sylvester) mouth

491   However, after analyzing the speech with the gesture the interpretation changes:

492         9(a revised) [Y le mete una bola]

493               [G9a]

494         [And into his (drainpipe) inserts a ball]

495          And (Tweety) inserts a ball into the drainpipe (Sylvester is using to climb up)

496         G9a: Both hands chest height palms facing each other, hands open fingers splayed

497            as if holding a big ball, slight movement up and down.

498   In Example 9a the gesture is representing the ball (even before the ball is mentioned in the

499   speech) and the action of dropping the ball in a downwards direction. Tweety is not inserting

500   the ball into Sylvester but into the drainpipe, the gesture implies that gravity is the only force

501   needed to take the ball downwards. Had Tweety been inserting the ball into Sylvester more

502   force would be expected in the depiction of the gesture.

503         9(b revised) [Se la mete dentro] de la boca

504                [G9b]

505         [Into-*se* it inserts inside] of the mouth

506         He (Sylvester) inserts it (the ball) inside the (Sylvester's) mouth = Sylvester

507          swallows the ball

508         G9b: Both hands chest height right hand (RH) slightly higher. Both hands cupped

509           towards body, they move inwards in a rotating motion. The gesture indicates that

510           Sylvester swallows the ball.

511   In Example 9b the marker 'se' can be an indirect object pronoun or can refer to a subject which

512   is not the agent but the recipient, so 'se' is not a reflexive pronoun but a causative one. There

513   is no loss of agency but of transitivity, as measured by the degree the action is affecting the

514   ball. The argument being that 'se mete la bola' (a receiver), will have less transitivity than (an

515   agent) 'mete la bola', where the action by the agent is affecting what happens to the ball. Here,

516   the gesture helps to clarify the meaning.

*5.4 The cat swallows the ball ('comerse')*

518 The corpus has 13 descriptions of eating or swallowing the ball using the verbs 'comer' (4

519 occurrences) or 'tragar' (9) respectively. All cases the use of 'se + ingest', eight in Mexican

520 participants and five in Spanish, suggest this is common to both language varieties. Ingesting

521 verbs are transitive verbs which allow the pronominal construction when there is a specific

522 direct object. It is not necessary to use the marker. However, by using 'se' the action is

523 reinforced and it also introduces a telic aspect (the action is completed in its entirety).

524 Therefore, in Example 10 it is understood that the ball is swallowed whole:

525 Example 10 (Mexican 6)

526     [se la <u>comió</u>]

527     [G10]

528     [*se* it <u>eats</u>]

529     It (the cat) eats it (the ball)

530     G10: both hands come up from being interlaced at the crossed knee, palms open inwards

531         fingers pointing up, arms come in toward the body and the hands circle inwards at the

532         wrist and then return to the resting position.

533

534 Examples 10 and 9b are typical examples of the gestures we observed with this event, although

535 it can also be performed just with one hand, sometimes indicating the path of the ball down the

536 body. Among the Spaniards we found four instances where the gesture co-occurred with the

537 'se + ingest' utterance and eight in the Mexicans. In none of the Mexican cases was the 'se'

538 part of the stroke, in the Spaniards two instances of 'se' were part of the stroke and one was a

539 discursive gesture which did not seem to have iconic meaning related to the event described,

540 but could be stressing the marker. As the marker is not strictly necessary, its inclusion could

541 mean that the additional meaning it provides (the telic element) is important to the speaker, in

542 which case we would expect to observe a referent to the object (the ball) in the gesture.

543 However, this is not so; instead, we observe a reference to the figure, the cat, represented by

544 the speakers' own body and the action. Most of the gestures accompanying 'se + ingest'

545 included both the marker and at least part of the verb, with the hand/s pointing towards the

546 speakers' own bodies, at chin height, usually with a slight flexing of the wrist (indicating

547 'oneself') and then a downwards rotation of the wrist, or even downwards movement from the

548 elbow.

549       As all speakers used the marked form when talking about ingesting, it would seem that

550    this use has become lexicalized (Mendikoextea, 1999). The article ('una') is already indicating

551    the ingested object in its entirety, not a part of it, so the marker does not seem to be adding any

552    additional information as to the completeness of the action (the object eaten whole) but instead

553    focuses on the subject ingesting the object. Maldonado (1999) pointed out that the marker is

554    often seen in middle voices when the identity of the subject is ambiguous. We would argue this

555    is what we observe in the 'se + ingesting' examples, as the subject ingesting the ball is not

556    entirely clear in the speech ('se' could refer to Tweety or to Sylvester) it would seem that

557    speakers use the gesture to clarify the identity of the subject, rather than to stress the

558    completeness of the action.

559    *5.5 The cat exits the pipe*

560    The cat exiting the pipe is not always described (in speech or in gesture), being combined with

561    the next event, where the cat rolls down the street into the bowling alley. When describing it

562    the Mexican speakers mostly used the verb 'salir' (to exit: five cases, two marked), the

563    Spaniards used it just once, unmarked. The verb 'salir' takes both the marked and unmarked

564    forms. The marked form could imply the change of state (Sánchez López, 2002), the dynamic

565    nature of the action (Maldonado, 1999), the reference to an external agent causing the action

566    (Azpiazu Torres, 2005), or speaker involvement (Torres Cacoullos & Schwenter, 2008). One

567    of the participants, Mexican1, uses both the marked and unmarked versions in a self-repair

568    (Example 11):

569    Example 11 (Mexican1)

570        [[pues sali][ó / se salió fuera]]

571        [G11a] [G11b]

572        [[well he-exi][ted / *se* exited outside]]

573        well he exited he exited (the tube)

574        G11a: both hands by chest rotating towards body at the wrist. This is an ambiguous

575        gesture as it looks like a previous gesture used to indicate the cat swallowed the ball.

576        However, it could also be gesture preceding the speech and referring to the cat rolling

577        down the street.

578        G11b: the previous gesture is repeated with the hands descending slightly as the

579        rotation takes place. Therefore, it is more likely to be a representation of the manner in

580        which the cat goes down the street.

581   We observed almost the same gesture in both the marked and unmarked versions of 'salir',

582   with the additional path (downwards) suggested in the second gesture. In both cases, the

583   speaker seems to be more focused on the rolling motion of the next event. From the gesture, it

584   would seem that the focus is the change of state. However, we also observed a similar focus on

585   the change of state with unmarked cases of 'salir' (Example 12), where the gesture traces a

586   downwards path (down the drainpipe) and to the right (exiting the pipe).

587   Example 12 (Spanish7)

588       [Y sale despedido …]

589       [G12]

590       [And he-exits thrown-out …]

591       And he is thrown out

592       G12: the right hand, palm extended by the neck traces a descending path than veers

593          towards the right at the bottom. The stroke is seen with the conjunction 'y' (and),

594          although the gesture continues and is repeated later on.

595   In this event, the expectation was to see a higher use of 'se', not only because of the energy of

596   the action (Maldonado, 1999) but also because it was caused by an external agent (the ball).

597   However, for both the marked and unmarked utterances the gesture seems to focus on the

598   change of state, the exit from the drainpipe. As the stroke did not occur with the verb, we would

599   suggest that the lack of synchronicity of the utterance of the verb with the stroke of the gesture

600   might indicate that the action is not considered a key point in the narration; it is the next event

601   that is seen as more salient (rolling down the street). Perhaps this is the reason why most

602   speakers do not use the marker 'se', as there is no need to energize 'salir' (Maldonado, 1999)

603   and speakers do not feel as involved with this action as with the next (Torres Cacoullos &

604   Schwenter, 2008) .

605   *5.6 The cat rolls down the street to the bowling alley ('irse' and 'ir')*

606   The description of this event often leads to the use of the verb 'to go' + satellites (an adverbial)

607   indicating the path or the manner of the action. Among Spaniards we find four cases of 'ir' (to

608   go), one marked, and nine in Mexicans, six marked. As has been mentioned above, some

609   speakers link this event with the previous one.

610   Example 13 (Mexican7)

611    13a […o sea el gato se va]

612        [G13a]

613    that is [the cat *se* goes]

614    that is the cat exits (the pipe)

615    G13: RH up by head, palm facing down, slightly left, fingers slightly flexed, arm drops

616    fast at elbow


617    13b [Se va rodando con todo el gato] [la bola]

618        [G13b.a]                    [G13b.b]

619    [*Se* goes rolling with the-whole the-cat] [the ball]

620    The ball rolls with the cat

621    G13b.1: RH fingers extend, palm facing down, goes down and up and outwards from

622    lap up to chest height.

623    G13b.2: RH wrist rotates (indicating rolling).

624

625    In 13a, grammatically, there are two possibilities: the speaker can use both 'va' and 'se va' to

626    mean 'go' or 'leave' respectively. Both are intransitive forms of the verb but in the first case,

627    the listener expects additional information to learn the destination or the manner of the action

628    for the utterance to be completed, such as:

629        El gato va a la bolera (the cat goes to the bowling alley)

630        El gato va rodando (the cat goes rolling)

631    On the other hand, when using the marked expression 'se + ir (to go)', no additional

632    information needs to be given for the sentence to be complete. One of the reasons is that,

633    pragmatically, the use of the marked form of 'ir' (to go), implies completeness (telicity), a

634    finality to the action that requires no additional information and makes it more commonly seen

635    with the past perfect than with the present. Used with the present tense it tends to imply an

636    immediate future (which is not the case here).

637        Se va (He is about to go)

638    It is, perhaps, an unusual verb to use in this situation as 'se + ir' conveys a notion of self-

639    control, one chooses when to go (which is not the case here). One possibility is that the speaker

640    had various thoughts, obvious in the gesture, but mixed up in the speech. One thought was 'the

641    cat falling down the pipe', another 'the cat exiting the pipe as a ball' and a third one 'the ball

642    did all of this'. Because the next sentence (13b) also starts with 'se va', if the listener did not

643    have access to the gestures, she might assume that the speaker is just repeating himself and

adding the manner of the motion 'rodando' (rolling) to 13a. However, on analyzing the gesture in 13b we can observe a different action from 13a, something moving outwards and rolling. It turns out that the two uses of 'se' in 13a and 13b are referring to different subjects, confirming the meaning of 13a as: 'the cat leaves' and in 13b 'the ball goes rolling'. This is not obvious in the speech until the speaker has added 'con todo el gato, la bola' (the ball goes rolling with the cat) to the end of the sentence. Therefore, it is likely that we are dealing with a self-correction where the speaker repeats the words 'se va' but with different ideas in mind.

In 13b, both the marked and unmarked versions are possible, with the same grammatical meaning (it goes rolling). The use of the marker could be best explained by Maldonado's theory (1999) of dynamicity (although change of state and external agent theories could also apply). The marker provides energy to the action, making the action more dynamic. The gesture in 13a depicts a fast drop down the pipe. In 13b.1 the gesture describes the action of exiting pipe and in 13b.2 a rolling motion. Therefore, the change of state is not occurring with the 'se' clause but with the next one (from falling to rolling). As the marker (which is not necessary) in 13b is part of the gestural phrase but not part of the stroke ('se' co-occurs with the preparation of the stroke) while in 13a the marker (necessary) is part of the stroke, we speculated whether in 13b the speaker was aware of the redundancy of 'se' so he reduced its saliency by not marking it with a gesture.

In Example 14 two utterances with the same verb were observed, one marked and one unmarked:

Example 14 (Mexican1)

[… se fue directo][y va directo al]lí

[G14a]                [G14b]

[… se went directly][and goes directly ther]e

… went directly and went directly there

G14a: Right hand palm up moves from center of body out and right. Indicating exiting the pipe, as did the gestures of the previous event.

G14b: Both arms rotate at elbow moving rightwards, palms facing down semi-extended. Representing the rolling motion.

From analyzing the gesture it would seem that the first utterance (14a), which is marked and uses the past tense, 'se fue directo' refers to the exiting from the pipe, while the second (14b),

675 unmarked and in the present tense, 'y va directo' refers to the rolling down the street. It would

676 seem that the speaker uses the two forms to imply different meanings. As discussed above,

677 grammatically, the marked verb ties in better with the past tense, reinforcing the telicity of the

678 action. It is the only case where the gesture representing exiting from the pipe is synchronous

679 with the verb. Perhaps the speaker feels the verb needs to be marked because the information

680 conveyed by it is fairly general (and does not indicate she is talking about 'exiting').

681　　　　Among Spanish speakers, out of the three unmarked verbs observed two occurred with

682 gestures that were related to the manner (rolling and walking respectively) or path (down the

683 road). The marked verb co-occurred with a gesture:

684 Example 15 (Spanish8)

685　　　　[Y hace de que [Silvestre se vaya calle abajo]]

686　　　　[G15a]　　　　　　　[G15a]

687　　　　[And makes of that [Sylvester se goes street down]]

688　　　　And causes Sylvester to go down the street

689　　　　G15a: left arm resting on arm rest palm faces down, palm twists up from wrist and then

690　　　　rotates to right, the gesture indicating exiting.

691　　　　G15b: The previous gesture is repeated but as the palm rotates to the right the whole

692　　　　arm lifts making the amplitude of the gesture wider. It would seem that the first gesture

693　　　　indicates the cat exiting while the second highlights the distance.

694 Both gestures are fairly fast, indicating the dynamicity of the action (Maldonado, 1999) as well

695 as the change of state (also observed in Example 14), which is stressed both in the speech ('hace

696 de que') and in gesture 15a (which indicates the release from the pipe). Note that although the

697 expression "hace de que", in this context, is not acceptable in the standard variety of Spanish,

698 it is fairly common in the Andalusian variety used by this participant.

## 6. Conclusions

700　　　　This study explored the use of gestures in Mexican and Spanish speakers of Spanish in

701 utterances with the marker 'se' to identify whether the gesture clarifies or specifies the

702 functions of 'se' and whether there were differences between Mexican and Spanish speakers.

703　　　　The analysis did not highlight any functional differences in the use of 'se' between the

704 two groups; perhaps a bigger sample, studied in the same depth, would provide greater insight.

23

705  There are, however, some differences in the use of the marker: Although the Spanish speakers

706  all spoke the Andalusian variation of Spanish, the closest variation to American Spanish,

707  Mexicans are still more likely than the Spaniards to use the marker 'se', supporting the

708  observations by Aarón and Torres Cacoullos (2006). Mexican speakers were slightly more

709  loquacious than the Spanish, uttering a total of 663 words to narrate a combined total of 36

710  events, while the Spanish uttered 566 words to narrate 33 events. However, Mexicans used 'se'

711  almost twice as often as Spanish speakers, including all functions of the marker. Mexican

712  speakers also employed 'se' almost twice as often with physical action verbs (those considered

713  in this study), indicating telicity, change of state, an external force or energizing the verb. This

714  group is also more likely to use the marker with a wider range of verbs than Spanish speakers

715  (who mostly used 'se' with verbs denoting ingestion). Mexican speakers were also more likely

716  to use optional marked verbs. A possible explanation could be that with use (most Spanish

717  speakers are in the Americas) the frequency and functionality of the marker 'se' expands, just

718  as it has done since Roman times (Azpiazu Torres, 2005; Sánchez López, 2002). Additional

719  studies with other American speakers of Spanish at different points in time would be needed to

720  confirm these results and offer further explanations.

721      Both Mexicans and Spanish usually gestured with utterances that included the marker

722  and, for both groups, in over half of the cases observed, the stroke occurred with the utterance

723  of the marker. These results suggest that both groups considered the marker an important

724  meaning providing unit and a salient part of the utterance, as it was included in the stroke

725  (McNeill, 2015).

726      The analysis showed that the different functions attributable to 'se' (different pragmatic

727  meanings) are clarified by the gesture by both groups of participants. In particular, we focused

728  on the functions of 'se' as an indicator of telicity, change of state, an indication of an external

729  agent or providing energy to the action. The most frequent use of 'se' was with ingesting verbs.

730  Although in some cases the marker is not necessary, it seems to have been lexicalized, by both

731  Mexicans and Spanish, as an expression ('se come', 'se traga'). These could be cases of semi-

732  conventionalized gestures (Ladewig, 2013). In these examples (section 5.4) 'se' was observed

733  to stress not the telic aspect of the ingesting action (as suggested by Sánchez López, 2002) but

734  the subject performing the action. In these utterances the information given by the gesture

735  referred not to the object being ingested (the ball) but to the subject ingesting it (the cat).

736  Maldonado (1999) suggests that 'se' is often used in middle voices, when the subject is unclear,

737  to clarify the subject, which seems to correspond to our observations. It seems that speakers
738  want to ensure that the listener understands it was the cat who ate the ball (briefly taking on the
739  cat's point of view) and representing it with the gesture.

740  However, this representation of the figure through the gesture does not take place with
741  the other cases of 'se + motion verb'. In the examples provided in section 5.1 ('se + meter') the
742  action, rather than the subject, is the focus of the gesture (energizing it by specifying its manner
743  or path). In section 5.2. ('se + subir' and 'subir') the gesture analysis leads us to believe that
744  speakers are also using 'se' to infuse the action with energy (Maldonado, 1999). In the marked
745  cases, the gesture focuses on the action in progress but with the unmarked utterances the focus
746  is on the drainpipe. The gestures in section 5.3 ('se + meter' and 'meter') highlighted their
747  importance in clarifying the agent or subject in marked utterances (as 'se' could refer to either).
748  With the verb 'salir' (section 5.5) the marker is unnecessary. However, our participants, from
749  both groups, provided utterances both marked and unmarked, with the gestures highlighting
750  the change of state, rather than focusing on the unexpectedness of the action or on external
751  forces causing it (Aarón & Torres Cacoullos, 2006). This would suggest it is the verb, not the
752  marker, providing the aspectual nuance (de Miguel, 1992). The gestures co-occurring with the
753  utterances in the last description (section 5.6), seem to stress the energy of the action but also
754  change of state (from inside to outside the pipe), and in particular from falling to rolling down
755  the street.  From our results, it would seem that both Mexican and Spanish speakers are using
756  the gesture to provide additional information to clarify the function of the 'se'. In particular,
757  the use of the gesture in cases of middle voices can disambiguate the agent and the object.
758  Although the gesture might clarify the function of certain uses of 'se', such as when indicating
759  the figure, it is not possible to conclude that the function of the marker becomes obvious once
760  the gesture is included in the analysis.

761  Gestures are idiosyncratic and seldom resemble each other if performed by different
762  individuals. However, in this study we observed certain similarities in gestures referring to
763  ingesting, throwing the ball and exiting the pipe, probably due to the common visual input on
764  which the narrations were based. This last gesture was interesting as in all cases, regardless of
765  the hand used to perform it, the movement always pointed right (the same direction as in the
766  video), a detail never mentioned in the speech. This leaves no doubt that a combination of
767  speech and gesture aids the listener in understanding the nuances of the story. All speakers give

768 slightly different information through the speech and the gesture and often both are necessary

769 to clarify the narration.

770 **Acknowledgements**

771 (Deleted for review purposes)

772 **References**

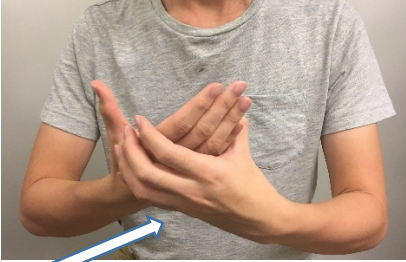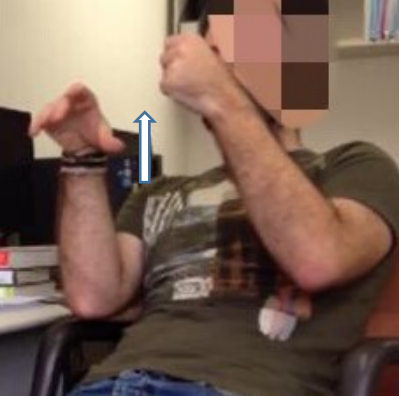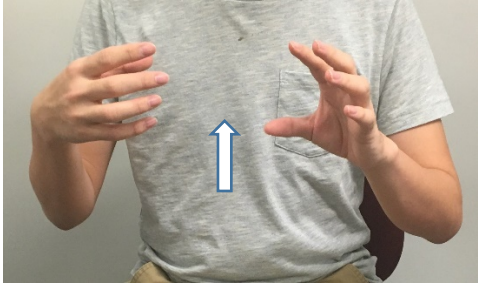773 Aarón, J. E., & Cacoullos, R. T. (2006). Te sales: ¿puede cuantificarse la
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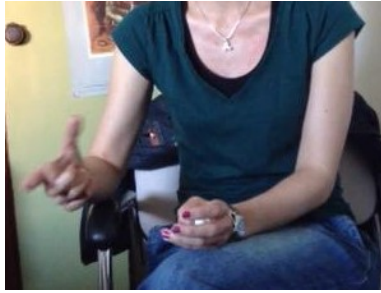878      University Press.

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Appendix 2. Photos of selected gestures.

| | |
|---|---|
| Gesture 1 (participant: Mexican7)<br><br>El gato [se mete <u>por el medio de la</u> tubería] | Gesture 2 (Spanish9)<br><br>Silvestre [coge y se mete <u>por el canalón</u>] |
| Gesture 3a (Spanish3)<br><br>[En tercer lugar <u>se mete</u> en- …] | Example 4 (Mexican1)<br><br>Y cua[ndo <u>se va</u> subiendo] |
| Gesture 5a (Spanish9) 'subirse'<br><br>La tercera vez [en vez de <u>subir</u>se …] | Gesture 6 (Mexican3)<br><br>Entonces [<u>subió</u>] por un tubo de agua |

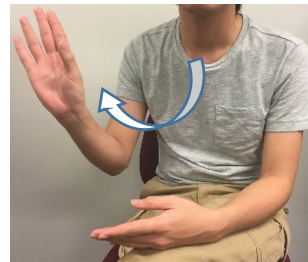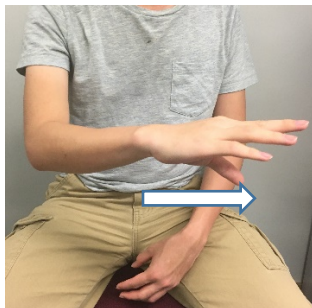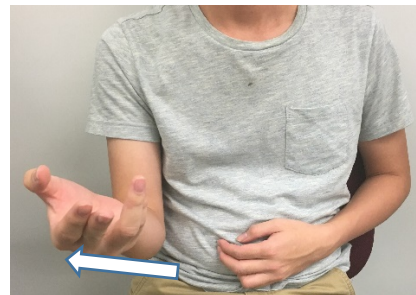| | |
|---|---|
| Gesture 7a (Spanish7)<br><br><br><br>[la tercera vez intenta subir- subir …] | Example 8 (Spanish 8)<br><br><br><br>[…vuelve a subir por la] tubería |
| Example 9a (Mexican1)<br><br><br><br>[Y le mete una bola] | Example 10 (Mexican 6)<br><br><br><br>[se la comió] |
| Gesture 11b (Mexican1)<br><br><br><br>[… se salió fuera] | Gesture 12 (Spanish7)<br><br><br><br>[Y sale despedido …] |
| Gesture 13 (Mexican7)<br><br><br><br>[Se va rodando con todo el gato] | Gesture 14a (Mexican1)<br><br><br><br>[… se fue directo] |

| Gesture 15b (Spanish8) | Note: Some gestures were represented by actors (please disregard gender) as photos from the videos were not always clear. |
|---|---|
|  [Silvestre se vaya calle abajo] | |

Table 1. Main verbs used to describe each episode (frequency in brackets):

| | Mexican (combined total of 36 events narrated) | | Spanish (combined total of 33 events narrated) | |
|---|---|---|---|---|
| | Unmarked | Marked | Unmarked | Marked |
| The cat climbing inside the drainpipe (Subdivided into the two actions: getting inside the pipe and climbing up) | Entrar (6) - go in<br>Subir (1) - get on top<br>Meter (0) - put inside<br>Ir subiendo (0) - go | --<br>Subirse (1) – go up<br>Meterse (4) – go inside<br>Irse subiendo[1] (1) – go up | Entrar (2) - go in<br>Subir (5) - go up<br>Meter (0) - put inside<br>Trepar (2) - climb<br>Colar (0) - sneak in<br>Ir (1) - go<br>Escalar (1) - climb | --<br>Subirse (1) - get on top<br>Meterse (2) - go inside<br>--<br>Colarse (3) - sneak in<br>Irse (0) - go<br>-- |
| The bird throwing the ball down the drain | Lanzar (1) - throw<br>Meter (1) - put inside<br>Poner (1) - put<br>Aventar (3) - throw<br>Dar (1)<br>Introducir (1) - put inside | --<br>--<br>--<br>--<br>--<br>-- | Echar (3) - throw<br>Tirar (6) - throw | --<br>-- |
| The cat swallowing the ball | Comer (0) - eat<br>Tragar (0) - swallow<br>Meter (0) - put inside | Comerse (4) - eat<br>Tragarse (4) - swallow<br>Meterse (2) - put inside (oneself) | Comer (0) - eat<br>Tragar (0) - swallow<br>Meter (0) - put inside up in the stomach<br>Encontrar (0) - meet | Comerse (2) - eat<br>Tragarse (5) - swallow<br>Meterse (0) - put inside (oneself)<br>Encontrarse (1) - meet |
| The cat exiting the pipe | Salir (4) - exit<br>Ir (1) - go | Salirse (1) - leave<br>Irse (0) - go | Salir (1) - exit<br>Acabar en (2) – end up in<br>Caer (1) - fall<br>Subir (1) – go up | Salirse (0) - leave<br>--<br><br>Caerse (0) - fall<br>Subirse (0) – get on top |
| The cat rolling to the bowling alley | Ir (4) - go<br>Meter (0) - put inside<br>Botar (1) - bounce | Irse (7) - go<br>Meterse (2) - get inside<br>-- | Ir (3) - go<br>Acabar en (1) – end up in<br>Aterrizar (1) - land | Irse (1) - go<br>--<br><br>-- |
| **Total** | **25** | **26** | **30** | **15** |

[1] Please see Example 4.

Note: -- indicates the form is not possible in this context.

Appendix 1. Participants' information.

| Code | Gender | Age | Nationality | Residence other than country of birth | Second Language | Education |
|------|--------|-----|-------------|---------------------------------------|-----------------|-----------|
| Spanish1 | Female | 19-24 | Spanish by birth | Spain | Spanish and English | Completing higher education |
| Spanish2 | Male | 19-24 | Spanish by birth | Spain | Spanish and English | Completing higher education |
| Spanish3 | Male | 19-24 | Spanish by birth | Spain | Spanish and English | Completing higher education |
| Spanish4 | Female | 19-24 | Spanish by birth | Spain | Spanish and English | Completing higher education |
| Spanish5 | Female | 19-24 | Spanish by birth | Spain | Spanish and English | Completing higher education |
| Spanish6 | Male | 19-24 | Spanish by birth | Spain | Spanish and English | Completing higher education |
| Spanish7 | Female | 25-30 | Spanish by birth | Spain | Spanish and English | Completing higher education |
| Spanish8 | Female | 19-24 | Spanish by birth | Spain | Spanish and English | Completing higher education |
| Spanish9 | Male | 19-24 | Spanish by birth | 6 months in HK | Spanish and English | Completing higher education |
| Mexican1 | Female | 19-24 | Mexican by birth | not known | Spanish and English | not known |
| Mexican2 | Male | 19-24 | Mexican by birth | 4 years in USA | Spanish and English | Secondary education completed |
| Mexican3 | Female | 26-31 | Mexican by birth | 3 years in USA | Spanish | Higher education completed |
| Mexican4 | Female | 32-38 | Mexican by birth | 4 years in USA | Spanish and English | Higher education completed |
| Mexican5 | Female | 19-24 | Mexican by birth | 3 years in USA | Spanish and English | Secondary education completed |
| Mexican6 | Female | 26-31 | Mexican by birth | 4 years in USA | Spanish and English | Higher education completed |
| Mexican7 | Male | 19-24 | Mexican by birth | 2 years in USA | Spanish and English | Higher education completed |

| Mexican8 | Female | 32-38 | Mexican by birth | 5 years in USA | Spanish | Higher education completed |
| Mexican9 | Female | 32-38 | Mexican by birth | 4 years in USA | Spanish and English | Higher education completed |