
This is the **published version** of the bachelor thesis:

Olivares Gil, Ariadna; Fernández Montraveta, Ana, dir. The Expression of Manner and Cause in Motion Events by Native English-Spanish Bilinguals. 2017. 58 pag. (836 Grau en Estudis d'Anglès i Espanyol)

This version is available at <https://ddd.uab.cat/record/179969>

under the terms of the  license

**The Expression of Manner and Cause in Motion Events
by Native English-Spanish Bilinguals**

Treball de Fi de Grau

Grau en Estudis d'Anglès i Espanyol

Supervisor: Dr. Ana Fernández Montraveta

Ariadna Olivares Gil

June 2017



ACKNOWLEDGEMENTS

I wish to express my gratitude to Dr. Fernández Montraveta who has always seen the best of my work and appreciated all my effort; this paper would have not been a reality without her constant guidance. I also wish to thank her for her constant dedication in finding participants for this paper.

I am deep of gratitude to Mr. Ignasi Armengol Santos for agreeing to appear in all the videos for the task. I also want to express my gratitude towards the participants who took the time to answer the task and judge it so I could make the proper improvements.

I would like to extend my gratitude to my family, my partner and my friends who have been supportive along the way and have understood my ups and downs. I would specially like to thank my mother, the woman who has proved that effort is always rewarded and that giving up should never be an option. Finally, I would like to dedicate this paper to my grandfather, the man from whom I have learnt the importance of hard work and loving what you do.

Table of contents

Index of tables	ii
Abstract	1
1. Introduction	2
2. Literature review	4
2.1. Cognitive linguistics.....	4
2.1.1. The Sapir-Whorf Hypothesis.....	5
2.1.2. Lexicalization Patterns	6
2.2. Bilingualism	12
2.2.1. The Fusion Hypothesis.....	13
2.2.2. The Formal Complexity Hypothesis	14
2.2.3. The Separate Development Hypothesis	15
3. Methodology	16
3.1. Participants.....	16
3.2. Instruments.....	17
3.3. Procedure.....	18
4. Results.....	19
4.1. Bilingual participants	20
4.2. Monolingual participants.....	22
4.3. Comparison of the results of bilingual and monolingual participants.....	24
5. Discussion	25
6. Conclusion.....	29
List of references.....	31
APPENDIX A: Task and background questionnaire	34
APPENDIX B: Consent Form.....	41
APPENDIX C: Results	43
APPENDIX D: Media.....	53

Index of tables

Figure 1. Talmy's analysis of a motion event in a verb-framed and in a satellite-framed language.....	11
Table 1. Bilinguals' answers.....	21
Table 2. Bilinguals' answers. General tendencies and deviations marked.....	22
Table 3. Monolinguals' answers.....	23
Table 4. Monolinguals' answers. General tendencies and deviations marked	24

Abstract

This paper studies the expression of cause and manner of motion events by native English-Spanish bilinguals in comparison to native English monolinguals. English being a satellite-framed language tends to express these two components conflated in the main verb of the sentence; Spanish is a verb-framed language and these components are expressed by an adjunct (Talmy, 1985). This issue has been largely studied but not approached from the point of view of native English-Spanish bilinguals. The aim of this paper is to investigate whether native English-Spanish bilinguals express manner and cause of motion like English monolinguals do or if there is some kind of transfer from Spanish. Two groups of five informants covering the age range from 12 to 15 completed a task in which they chose the sentence(s) they thought best described the video/picture they visualized. Our findings indicate that native English-Spanish bilinguals express manner and cause of motion as English monolinguals. Both groups of informants showed preference for the English pattern and expressed manner or cause conflated in the verb. However, bilinguals selected two descriptions for one question more frequently than monolinguals, which may be an indicator that they are able to perceive reality as both English and Spanish monolinguals. Since the methodology presented has proven to be successful, future investigations should replicate it in a larger scale for findings to be considered representative.

1. Introduction

English and Spanish resort to different mechanisms to express manner and cause of motion events. According to Talmy (1985), whose work laid the foundations for this paper, manner and cause are conflated in the motion verb in English but not in Spanish, as in this language these components are expressed by means of non-compulsory elements such as subordinate clauses.

The Sapir and Whorf's Hypothesis (a name coined by Hoijer, 1954) links language to thought and defends that the way in which people perceive reality is conditioned by the language they speak. Slobin (1996a), with his *Thinking for Speaking Hypothesis*, states that "each community embodies a distinct-world view" (70) and he hypothesises that a particular world-view can only be obtained when learning an L1 but not an L2 (Slobin, 1996a). Thus, it is logical to assume that native bilinguals have two world-views.

This piece of research will contribute to the study of the expression of manner and cause in motion events, as it addresses the issue from a new perspective. Even though there are several studies on English-Spanish bilinguals (Krasinski, 1995; Deuchar and Quary, 1998, 2000; Deuchar, 1992, among others), none of them has researched into the expression of manner and cause in motion events by native bilingual English-Spanish speakers of the age range proposed in this paper (12 to 15 years old). The findings of this paper may also offer some guidelines for future studies about the bilingual mind functioning and the influences that one L1 may have upon another L1.

In this vein, this paper addresses three research questions:

- (1). Do native English-Spanish bilinguals express manner and cause of a motion event in English in the same way English monolinguals do?

- (2). If they use different mechanisms than the monolinguals, which are they?
- (3). Do native English-Spanish bilinguals have two distinct world-views related to each of the languages they speak?

This paper aims to elucidate whether native Spanish-English bilinguals aged 12 to 15 express manner or cause of motion conflated in the motion verb when speaking English or if they express it by means of an optional element, following the Spanish structure even when they choose to speak in English. Our hypothesis is that bilingual children will follow the Spanish pattern when expressing a motion event in English and, therefore, manner or cause will be expressed as an adjunct instead of using the English pattern.

This paper is divided into five sections. Section 2 presents a literature review that covers the two main topics that the paper addresses. Subsection 2.1 is related to cognitive linguistics and revises the typology of languages based on the *Lexicalization Patterns* (Talmy, 1985) and how English and Spanish behave according to this classification. Subsection 2.2 reviews several hypothesis on how the grammar of each language is organized in native bilingual minds. Section 3 explains the methodology followed and briefly presents the participants (3.1), the instruments (3.2) and the procedure (3.3) followed. In Section 4, the results are presented and discussed in Section 5. Finally, the main findings are highlighted and their implications discussed in the Conclusion (6). This section also reports the limitations of the paper and proposes future lines of research.

2. Literature review

This section is structured around the areas which are core for this paper. Section 2.1 presents some proposals that study the relationship between language and thought within the theoretical framework of Cognitive Linguistics. The *Sapir-Whorf Hypothesis* is briefly summarized in 2.1.1. Then, Subsection 2.1.2 covers Talmy's seminal work *Lexicalization Patterns*. Finally, section 2.2 is devoted to review works that deal with different aspects of the bilingual mind and the interaction of the multiple mental grammars of a bilingual speaker.

2.1. Cognitive linguistics

Within the framework of cognitive linguistics, several authors (Lee Whorf, 1956; Jakobson, 1959; Boas, 1966; Slobin, 1996a) believe that speaking a language implies having a particular conception of the world that surrounds us. Therefore, from this perspective, it could be inferred that an English speaker may conceive reality differently from the way a Spanish speaker does. Whorf (1956) defends the idea that there is a link between thought and languages:

Users of markedly different grammars are pointed by the grammars towards different types of observations and different evaluations of externally similar acts of observations and hence are not equivalent as observers but must arrive at somewhat different views of the world" (Lee Whorf, 1956: 221).

Seemingly, Slobin (1996a) states that children learning two mother tongues will develop two different world views and, thus, two different ways to refer to reality. The *Thinking for Speaking Hypothesis* (Slobin, 1996a) also links thought and language. In Slobin (2004), the author demonstrates that English speakers consider manner a notion they must express when verbalizing a motion event. English facilitates their conflation in the main motion verb of a sentence. Manner and cause are not usually conveyed by a motion verb

in Spanish, but through a dispensable external element and, therefore, it seems like Spanish speakers do not consider it relevant to express manner or cause of motion events, as Slobin's (2004) findings defend. This exemplifies the link between thought and language in the area this paper covers.

2.1.1. The Sapir-Whorf Hypothesis

This hypothesis supports the idea that language and thought are interdependent. Language influences our thoughts and the way in which we perceive reality. This can be accounted for two different principles: a weak one -also known as linguistic relativity- and a strong one -also known as linguistic determinism-. (Agar, 1994 and Deutscher, 2010).

On the one hand, linguistic determinism constitutes a radical view of the *Sapir-Whorf Hypothesis* and posits that the structure of a language determines its speakers' perception of reality (Deutscher, 2010). In other words, we only perceive what we can label linguistically. Along this vein, Agar (1994) postulates that language is conceived as a prison in this view given the fact that it prevents us from fully comprehending reality. In sum, what this view defends is that if, for instance, a language does not have different names for two tonalities of white, its speakers will not appreciate the difference or, at least, will not distinguish between them.

On the other hand, linguistic relativism, less radical and more supported by scholars than linguistic determinism, argues that the structure of a language affects but does not determine the way in which its speakers perceive reality. In other words, the structure of a language guides its speakers towards certain parts of reality. Other parts of reality are, however, noticeable by the speakers, so the restriction is not as strong as it is in linguistic determinism.

Within the field of bilingualism, Macnamara (1970, 1991) posits three options for the interpretation of the *Sapir-Whorf Hypothesis*. In the first place, he proposes that it could be interpreted that bilinguals think only with the structure of L_A but speak L_A and L_B given the fact that only one way of thinking is possible. Secondly, the critic proposes it can also be deduced that bilinguals' thought is organized in a hybrid manner, mixing the structures of the two languages they speak. Finally, according to Macnamara (1991) the hypothesis can also lead the reader into thinking that bilinguals conceive reality in a different way depending on the language they are using at the moment of thinking or speaking.

2.1.2. Lexicalization Patterns

The term *lexicalization* refers to the mechanism by which several semantic pieces of information are expressed by means of only one morpheme. Talmy (1985) coined the term *conflation* to refer to the coalition of diverse semantical information in just one grammatical element. Each language allows the conflation of different meanings. For the purpose of this paper, the review is centred in the conflation of manner or cause in a motion event (Talmy, 1985).

2.1.2.1. Verbs denoting Motion Events

Motion events are expressed by verbs that convey either the notion of translational movement or the continuation of a stationary location. Motion events have an internal structure composed of four different elements: figure, ground, path and motion itself (Talmy, 2003a). The figure in a motion event is the object that moves or that is in a stationary location; the ground is the object in respect to which the figure moves; the path makes reference to the direction towards which the figure moves or stands on; the motion refers to the actual movement that is implied by the verb. Motion can either imply movement (if there is a change in the placement of the figure) or not (if the figure does

not change its position in space); the former type of events are the *motion events* (1) whereas the latter are known as *stationary location events* (2) (Talmy, 1985).

(1) The rock bounced down the hill. (Talmy, 1985)

(2) The lamp lay on the table. (Talmy, 1985)

Talmy (1985) also distinguished between translational and self-contained motion when talking about actual motion events. Translational motion is related to the actual movement that the figure undergoes to change its position in space, whereas self-contained motion is used to refer to the movement that the figure itself suffers independently of the translation in space. Talmy (1985) uses the sentence ‘The ball rolled down the hill’ to exemplify this and states that the translational motion refers to the movement that makes the ball cover a distance by moving, whereas self-contained motion makes reference to the rolling movement that the ball makes upon itself in going down the hill.

Furthermore, verbs conflating manner and expressing an actual movement can either be used in non-agentive sentences such as (3) and in agentive ones such as (4). In an agentive sentence the grammatical subject is the agent of the sentence, whereas in a non-agentive sentence the subject acts as a patient and does not intentionally perform the action that the verb denotes.

(3) I bounced the keg into the storeroom. (Talmy, 1985)

The motion verbs conflating cause can also be used in agentive (4) and non-agentive (5) sentences, but cannot express stationary location, only actual movement.

(4) I blew the ant off my plate. (Talmy, 1985)

(5) The napkin blew off the table. (Talmy, 1985).

The four elements involved in a motion event can be identified in (6): the figure is ‘the bottle’ as it is the object that undergoes a process that makes it change its position in space. In this context, the bottle moves from the inside towards the outside of the cave. The ground is represented by ‘the cave’ since it is the element in relation to which the bottle is moving. The preposition ‘out’ expresses the path of the motion event, the directionality. The verb ‘floated’ in conjunction with the preposition ‘out’ denotes motion and not a stationary location which is conveyed in (7).

(6) The bottle floated out of the cave. (Talmy, 1991)

(7) The lamp lay on the table. (Talmy, 1985)

Aside from the four mentioned elements, it is important to consider the process to which Talmy (2003b) refers as *conflation*. When a motion verb expresses another meaning apart from a kind of movement or stationary location, it is said that it undergoes this process. A verb can conflate motion and path, motion and figure, and motion and a co-event (Talmy, 2003b). For the goal of this paper, only the latter will be considered. A co-event is the name given to the part of a sentence describing a motion event that expresses the manner or the cause of movement (Talmy, 2003b). This is illustrated by (6) and (7), as well. In (6), the verb ‘floated’, apart from expressing movement is expressing manner: how the figure changes its position in space. A verb that could be used in this sentence without conflating in it the manner of movement would be ‘moved’ as Talmy (1985) proposes. In (7). The verb ‘lay’ expresses not only location but also manner. Talmy (1985) proposes ‘is’ as a verb that does not conflate manner for this sentence.

Manner and cause are mutually exclusive in terms of the semantic components the verb can conflate. In other words, if a verb lexicalizes the manner of motion, it cannot lexicalize the path at the same time and the other way around. Similarly, a verb conflating

manner or cause cannot conflate path at the same time. (Talmy, 1985; Wenold, 1995; Levin and Rappaport, 2015).

2.1.2.2. Satellite-framed languages and Verb-framed languages

Talmy (1985) proposed a typology to classify languages according to the notions they tend to conflate in verbs of motion: satellite-framed languages and verb-framed languages. It is important to note the majority of languages do not purely fit into one of the two categories he proposed. As a consequence, the term ‘equipollently-framed languages’ was coined by Slobin (2004) to refer to the languages in which both manner and path can be expressed by the same procedures, linguistically speaking. Other researches had already noticed the need for a third type of languages to be added to Talmy’s proposal (1985) when studying West-African languages (Zlatev and Yangklang, 2004) such as Emai.

Satellite-framed languages conflate manner or cause of motion in the main verb of a sentence. English is a satellite-framed language and it rarely expresses manner or cause through a grammatical element other than the main verb of a sentence. Talmy (1973) stated that, in English, ‘expressions of manner in prepositional phrases and adverbial phrases are often considered heavy or unnatural’ (71). As a consequence, according to this author, (8a) is commonly used in English whereas (8b), although being grammatically acceptable, is not used by native speakers.

(8) a. The rock rolled down the hill.

b. The rock went down the hill rolling. (Talmy, 1985)

In satellite-framed languages such as English, the path is called a core schema (Talmy, 1985). In (8) the core schema is expressed by the preposition ‘down’ that denotes the path of movement in the sentence. This preposition is what Talmy (1991) calls the ‘satellite’

and defines it as the ‘grammatical category of any constituent other than a nominal or prepositional-phrase complement that is in a sister relationship to the verb root’ (Talmy, 1991: 486).

Verb-framed languages function oppositely to how satellite-framed languages do. They do not allow the expression of manner or cause conflated in the main motion verb of a sentence. In this type of languages, the core schema or path is expressed by the main verb of the sentence and not by an external particle as in English; it is the manner or cause that is expressed by a grammatical element other than the verb. This grammatical element can take different forms such as an adverbial phrase or a subordinate clause among others. Usually, these elements work as adjuncts and, therefore, their usage is optional. This contrasts with the satellite-framed languages in which the expression of manner is considered to be an indispensable feature. Spanish is a verb-framed language as sentences like (9) prove.

(9) La botella salió flotando. (Talmy, 1985)

In (9) the path is expressed by the main verb ‘salió’, whereas the manner is expressed by an adjunct that takes the form of a gerund (‘flotando’). There is a reduced group of Spanish verbs that conflate manner. Nevertheless, these verbs can only be used given that the crossing of a limit or physical boundary is not expressed (Slobin, 2004). For example, the verb *volar* includes movement and manner. However, following Slobin’s restriction, it is soon noticed that (10a) would be correct whereas (10b) would be an ambiguous sentence that is not conveying the desired meaning (the one conveyed in (10c).)

(10)a. El pájaro voló por el cielo.

b. El pájaro voló fuera de la casa.

c. El pájaro salió de la casa volando por la ventana.

In (10b) boundary crossing is implied and, therefore, a verb that conflates manner cannot be used in a Spanish construction. If manner were to be expressed, a constituent outside of the verb, like the gerund in (10c), would have to be used.

To sum up, Figure 1 is a graphical representation of the distinction between verb and satellite-framed languages. In verb-framed languages the verb expresses the motion and path but not the supporting event (Talmy, 1991) or co-event, whereas the opposite happens with the so called satellite-framed languages: the verb conflates motion and the co-event, but not the path which is expressed by a satellite.

Figure 2: syntactic mapping of Motion-type macro-event in verb framed languages

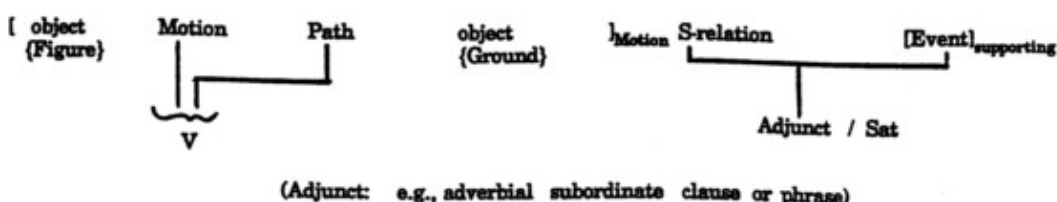


Figure 3: syntactic mapping of Motion-type macro-event in satellite-framed languages

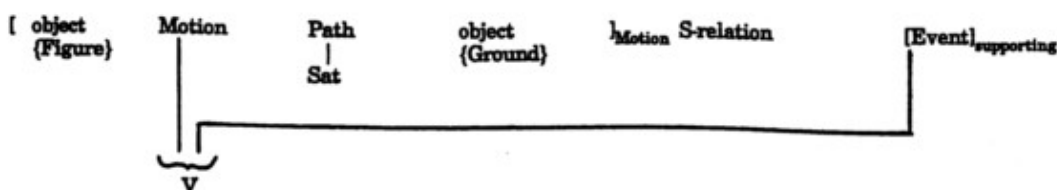


Figure 1. Talmy's analysis of a motion event in a verb-framed and in a satellite-framed language (Talmy, 1991)

2.1.2.3. The case of English and Spanish

As it has been mentioned, English is a satellite-framed language and Spanish a verb-framed one. Consequently, what is conflated in the verb differs drastically in each language. Slobin (1996b) states the difference between English and Spanish as it follows:

English has a large collection of verbs of motion which convey manner, but not directionality (*walk, run, crawl, fly*, etc.), combinable with a large collection of satellites (*in, up to, across*, etc.). Spanish prefers verbs of inherent directionality (*entrar, bajar, subir*, etc.), with more restricted use of nondirectional verbs of motion and some verbs of manner. (Slobin, 1996b: 196).

Because of the different ways that the two studied languages convey manner of movement, several differences between both can be spotted when a speaker of one of these two languages describes a motion event. The text which has been used the most to study these differences is *Frog, where are you?* by Mercer Mayer (2003 [1969]). The story consists of a series of images that display several types of movements (a frog jumping, a boy running from a frog, etc.). Several researchers have used it to study the issue (Slobin, 1996b; Slobin, 2004; Bennett-Kastor, 2002; Kang, 2003; Cadierno and Ruiz, 2006) but Slobin has done it to compare English and Spanish.

Slobin's findings (1996b, 2004) prove that English speakers tend to provide richer descriptions of movement in contrast with Spanish speakers given the fact English is a language that has more resources to convey detailed movement. Slobin (2004) asserts that English speakers tend to focus more than Spanish speakers on the manner of movement given the fact that their language allows them to express it. Slobin (2004) carried out his investigations with monolingual subjects of English or Spanish from the age of three. In addition to the results of his investigation, he also adds that through the analysis of English and Spanish novels and their translated versions, it can be observed that the 'manner of movement is more salient in English narratives' (Slobin, 1996b: 212).

2.2. Bilingualism

For the purpose of this study it is also relevant the idea of whether learning two different mother tongues favours confusing the grammar of the two languages or acquiring only the grammatical structures of one of these languages. The first scholar to empirically study the relationship of two languages in bilinguals was Ronjat (1913). Grosjean (1982) claimed that bilingual speakers exhibit language mixing at all linguistic levels. Scholars propose three different hypothesis which advocate different positions in the field

reviewed in this section: the *Fusion Hypothesis*, the *Separate Development Hypothesis* and the *Formal Complexity Hypothesis*. The *Separate Development Hypothesis* motivated the proposal of the hypothesis that this paper puts forward. Children who learn two languages from birth will be referred to in this paper as bilingual first language acquisition (BFLA) children, a term coined by Meisel (1989).

2.2.1. The Fusion Hypothesis

This hypothesis is defended by Volterra and Taeschner (1978) and posits that BFLA children do not learn the syntax and lexicon of each of their mother tongues equally. Volterra and Taeschner (1978) are certain that the fusion hypothesis is valid given the fact that BFLA children's utterance show a mixture of lexical elements from both of the languages they are learning. De Houwer (2005) refuses this hypothesis and the argumentation proposed by Volterra and Taeschner (1978) since, according to them, this is a phenomenon encountered in bilinguals of all ages and, the critic does not consider it relevant

Meisel (2001) supports De Houwer's (2005) confutation to the fusion hypothesis and pinpoints and explains three possibilities in which the *Fusion Hypothesis* can be supported and then argues against them. In the first place, Meisel (2001) posits that the *Fusion Hypothesis* could be referring to the fact that BFLA children, instead of having two separate grammars for each language they learn, have only one grammar for both which is the result of a mixture of these.

In the second place, Meisel (2001) also proposes that the *Fusion Hypothesis* may prove that the mental grammar of BFLA children is made up of elements that do not belong to any of the grammars of the languages the child is exposed to. Finally, Meisel (2001) summarizes Volterra and Taeschner's (1978) view by positing that the *Fusion*

Hypothesis may argue that BFLA children have a mental grammar that belongs only to one of the languages they are learning but applies to both. For example, a child learning Spanish and English may express manner or cause of a motion event without conflating it in the verb in both languages despite the fact that this is a process that would only undergo Spanish grammar.

All these possibilities are refuted by other scholars -such as Meisel, 2001 and De Houwer, 2005 among others- since they consider that there is no evidence proving these neither the hypothesis that comprises them. For this reason, the hypothesis presented in this paper does not rely on this proposal and choses to take the formal complexity hypothesis stance which is explained in section 2.2.3.

2.2.2. The Formal Complexity Hypothesis

Other critics (Amberg, 1987; Lindholm 1980 and Slobin, 1973) propose that BFLA children continuously compare both languages. When there is a different structure in each language to convey a meaning (like the case of motion event in English and Spanish, for example) children will tend to use the simplest construction independently of the language they are using at the moment. This is what the Formal Complexity Hypothesis (FCH) asserts, along with the idea that BFLA children learn both of their mother tongues separately but at an equal pace if the same amount of input is provided.

De Houwer (1990) proposes that BFLA children may learn a structure in one of their mother tongues before they learn the same structure in their LB. For example, an English-Spanish BFLA child may learn to express manner of cause in a motion event in English first than in Spanish since it is more used in the former language, as Slobin (2004) demonstrates. De Houwer (1990) claims that this postulation is not mutually exclusive with the FCH hypothesis and that both can be justified at the same time.

Notwithstanding, De Houwer (1990) warns about the subjectivity that this view implies. What may seem extremely difficult for speakers of one language may be considered exceptionally easy by speakers of another. A native Spanish speaker may think that the expression of manner is more complicated in English than in Spanish because it uses a different linguistic mechanism, but an English monolingual may think the same about Spanish. Unfortunately, there is no consensus to rate languages in their difficulty and, therefore, the FCH cannot be widely accepted as it has not been established what it really stands for.

2.2.3. The Separate Development Hypothesis

De Houwer (1990) proposes the *Separate Development Hypothesis* (SDH) that defends that BFLA children learn each of their languages as a separate and differentiated set of forms. That is to say, a BFLA child will be perfectly able to differentiate between the languages that he speaks and will not confuse their grammars. In this project the proposal of De Houwer (1990) will be used as it is the one that has been more spread out on the literature.

According to the SDH, the two mother tongues of a BFLA child do not influence each other. Moreover, unlike what Volterra and Taeschner (1978) proposed, the SDH advocates the view that the grammars of the two languages are distinct and the speaker perceives them as different from the beginning (De Houwer, 1990).

De Houwer (1990) carried out a study involving just one BFLA child named. She studied her linguistic development from 2;7 to 3;4. the child received linguistic input in both, Dutch and English and, when compared to monolinguals of one of these two languages, she was equally competent in both since the age of three. De Houwer (1990)

indicated that the child was fully bilingual by the age 31 months and referred to her as ‘two monolingual children in one’ (De Houwer, 1990: 339).

De Houwer’s (1990, 2005) proposal is widely accepted (Lindholm and Padilla, 1978a, 1978b; Lindholm, 1980 and Bergman, 1976, 1977) and there is no empirical study that refutes this proposal as De Houwer (2005) mentions in her article; this is why this piece of research follows this proposal. Regarding Spanish-English bilinguals, there have only been four relevant works studying native English-Spanish bilinguals (Krasinski, 1995; Deuchar and Quarry, 1998, 2000 and Deuchar, 1992). None of these studies focuses on the expression of manner and cause of motion events in BFLA teenagers and monolingual English speakers. This is why, the three research questions that the present paper covers are relevant for the study of the bilingual mind:

- (1). Do native English-Spanish bilinguals express manner and cause of a motion event in English in the same way English monolinguals do?
- (2). If they use different mechanisms than the monolinguals, which are they?
- (3). Do native English-Spanish bilinguals have two distinct world-views related to each of the languages they speak?

3. Methodology

This section is divided into three subsections. Subsection 3.1 covers the description of the participants, in Subsection 3.2 the instruments used for the study are specified and, finally, Subsection 3.3 describes the procedure followed to collect and analyse the data.

3.1. Participants

A total of 10 participants were selected for the realisation of the task. Of these, 5 were native English-Spanish bilinguals and the other 5 were English monolinguals. They all

fall within the age range of 12 to 15. All of the participants of the bilingual group, students of the Institut Fort Pius, spoke Catalan in addition to Spanish. This has not been considered relevant for the study as Spanish and Catalan, as Romance languages, are both verb-framed languages according to Talmy's (1985) typology. Slobin (1996a) states:

‘(...)Romance-type languages are referred to as V(erb)-framed since the path is lexicalized in the verb, while English-type languages are referred to as S(atellite)-framed because the path is expressed outside the verb, in what Talmy calls a ‘satellite’ (Slobin, 486)

The other group was composed of English monolinguals within the same age range as the bilinguals who had no contact with Spanish or any other Romance languages. A description of the profile of each participant, bilinguals and monolinguals, is provided in Appendix C. The bilingual participants have been coded with letters and the monolinguals with numbers in order to make it easier to distinguish between both groups when analysing the results.

3.2. Instruments

The task (see Appendices A and D) consisted of a picture/video judgement. The participants watched them and were given three sentences describing the situation they had just witnessed. Videos were used for recording movement events and images for stationary location events. The questions were asked differently: ‘Which of these sentences would you use to describe the action you have just seen?’ for video recordings and ‘Which of these sentences would you use to describe the picture you have just seen?’ for questions related to images. Among these 25 questions there were 5 distracters to divert the attention of the participants and make it more difficult for them to figure out the purpose of the task. These questions have been 6, 9, 13, 19 and 25 and are omitted from the tables and graphics in both Section 4 and Appendix C.

The answers had the form of multiple choice and were randomly ordered. Each participant could choose as many as he/she wanted. One of the answers is a sentence describing the event just witnessed in a more general way, without expressing manner or cause of movement (MCN); another answer describes the event with the manner or cause of movement conflated in the verb (MCC); and finally, the other possible answer is a sentence in which manner or cause of movement are expressed by means of a dispensable element, that is, an adjunct (MCO).

The sentences that constitute the answers in which manner or cause of motion are conflated in the verb have been taken and adapted from Talmy (1985). Since most of the images and videos that constitute the task were taken or recorded by the author of this study, sentences had to be edited to facilitate its reproduction in real life with the time and means available.

The last part of the survey consisted of a linguistic background questionnaire which was filled in at the end so as not to give any clues on the kind of information the research was about. The participants agreed to a consent form at the end of the questionnaire, but since they were all underage their parents also completed a consent form before allowing them to participate in the experiment (see Appendix B).

3.3. Procedure

A pilot study was carried out to guarantee the comprehension of the task by the future participants. This pilot study was also of service to check that there were no technical problems with the survey since it was designed to be completed online. The task and questionnaire were piloted by both, native English-Spanish bilinguals and English monolinguals whose knowledge of Spanish or other languages was non-existent. After

this pilot study, the task was improved taking into consideration the reviews directed towards the author.

The bilinguals' group was the first one to complete the task and the questionnaire in their high school. Despite the fact that the task and the questionnaire were designed to be completed online, by demand of the high school personnel, a printed copy was made and the images and videos were projected on a screen in a class to the whole group. They were given the instructions orally although instructions were also printed. It was made sure that they did not look at each other answers. The monolinguals' group filled in the task and the questionnaire through an online *Google Forms* link that was sent to their parents along with the consent form they had to fill in for their children.

Finally, results for both groups were analysed using descriptive statistics. They were presented in tables and some percentages were given to describe the participants' choices. An individual profile and table of results was created for each participant in order to extract some conclusions. All these can be seen in Appendix C. In addition, we used the chi square test to statistically prove the significance of our findings.¹

4. Results

Contrary to our expectations, no significant differences have been found between the two groups of informants. Our hypothesis was that bilingual participants would use the structure in which manner or cause was expressed as an adjunct (MCO) because of transfer from Spanish. Nevertheless, findings show that participants from both groups have used this structure in quite a similar way (Chi square test: $X^2_1 = 0.16$ $p = 0.7$ $N = 100$). We have also performed the same statistical test with the other two statements. Once

¹ For the calculations we have used an online contingency and chi-square calculator. <http://www.socscistatistics.com/tests/chisquare/Default2.aspx>

again, the probability value shows that for statements coded as MCN no statistically significant difference has been found (Chi square test: $X^2_1 = 0,48$ $p = 0.5$ $N = 100$). For the last statement, coded MCC, the results of the Chi square test are $X^2_1 = 1.17$ $p = 3$ $N = 100$.

In what follows we provide some descriptive figures of our findings. The individual results of each participant displayed in tables and graphics of percentages are presented in Appendix C. A profile for each participant can also be found in this appendix.

4.1. Bilingual participants

The most common answer amongst bilingual participants was MCC, selected 84% of times. Contrarily, the answer they were expected to choose more frequently (MCO) was the least selected (a mere 16% of times). MCN was chosen only 22% of times (see Table 1).

All the informants of this group selected two answers to respond to some of the questions at some point. Only in 7 out of the 20 items all participants selected just one option. The distribution is shown in Table 1 below. Items in which more than one option was selected are marked in yellow. The combination of answers they chose the most was MCN + MCC (10 out of 18 times). The least frequent combination was MCN + MCO as it was only selected 2 out of 18 times two answers were chosen. Finally, the combination MCO + MCC was chosen 6 times out of 18 and only by one of the participants. This information can be contrasted in Appendix C. The fact that MCN + MCC was the preferred combination shows a tendency of bilinguals to avoid expressing manner or cause. Only one of the participants chose all three options for questions 11 and 16 (See Appendix C, Participant #B). All the other participants selected the MCC answer for question 11.

Question	MCN	MCO	MCC	Number of answers
1	0	1	4	5
2	1	0	4	5
3	1	1	3	5
4	0	1	5	6
5	0	1	5	6
7	4	0	3	7
8	0	1	5	6
10	0	1	5	6
11	1	1	5	7
12	1	2	2	5
14	0	2	4	6
15	4	2	2	8
16	4	1	4	9
17	2	0	5	7
18	0	0	5	5
20	2	1	3	6
21	1	0	5	6
22	1	1	5	7
23	0	0	5	5
24	0	0	5	5
TOTAL	22	16	84	

Table 1. Bilinguals' answers.

Table 2 presents the items in which MCN was preferred over MCC marked in red. The fact that the informants preferred not to express manner in item 7 can be explained because of the lexical repetition in the MCC answer: 'The girl went down the slide sliding'. This repetition may have caused participants to consider this an unnatural choice. Item 16 also contains the verb 'to slide', but no lexical repetition occurs. However, the informants preferred avoiding the expression of manner in this case as well. The proposed answers for item 15 are stationary location sentences. However, it does not seem this is the reason why the omission of manner is preferred to its conflation since item 12 also has stationary location sentences and MCN is the least chosen answer. However, MCC is not the most selected option either. Although MCC is the most chosen answer, just in 3 out of 20 items (18, 23 and 24) it was the only one selected by all participants (marked in

green in Table 2. MCC was selected by all five participants (even if sometimes it was not the only choice) in 10 out of 20 occasions (marked in blue in Table 2)

Question	MCN	MCO	MCC	Number of answers
1	0	1	4	5
2	1	0	4	5
3	1	1	3	5
4	0	1	5	6
5	0	1	5	6
7	4	0	3	7
8	0	1	5	6
10	0	1	5	6
11	1	1	5	7
12	1	2	2	5
14	0	2	4	6
15	4	2	2	8
16	4	1	4	9
17	2	0	5	7
18	0	0	5	5
20	2	1	3	6
21	1	0	5	6
22	1	1	5	7
23	0	0	5	5
24	0	0	5	5
TOTAL	22	16	84	

Table 2. Bilinguals' answers. General tendencies and deviations marked.

4.2. Monolingual participants

As was to be expected, the most common response amongst the monolingual participants was MCC (78%) and the least selected was MCO (14%). MCN was only chosen 17% of the times.

All but one of the informers selected only one answer to respond to each item. The fact that one of the participants selected 2 answers for half the questions has an impact on the percentage of MCO. It is to be noted that the participant started selecting two items halfway through the task. Yellow cells of Table 3 mark the questions in which two options are selected by one of the participants (see Appendix C, Participant #05)

Question	MCN	MCO	MCC	Number of answers
1	0	0	5	5
2	1	0	4	5
3	0	2	3	5
4	0	0	5	5
5	0	0	5	5
7	3	0	2	5
8	0	0	5	5
10	0	0	5	5
11	1	0	4	5
12	1	2	2	5
14	0	1	5	6
15	4	0	2	6
16	3	2	1	6
17	0	1	5	6
18	0	1	5	6
20	2	1	2	5
21	0	1	5	6
22	2	1	3	6
23	0	1	5	6
24	0	1	5	6
TOTAL	17	14	78	

Table 3. Monolinguals' answers.

Table 4 presents the items in which MCN was preferred over MCC marked in red. The items in which this variation from the general tendency takes place are the same ones as for bilinguals, so the same reasons apply. Marked in green, Table 4 showcases the answers in which MCC was the only selected answer as it would be expected from Talmy's (1985) study. This only happens in 5 out of 20 questions (1, 4, 5, 8 and 10). However, it is to be noted that this ratio would be higher if one of the participants had not chosen two answers in 10 of the questions. As it happens in the case of bilinguals, these questions do not appear to have any aspects in common that may make them differ from the others. Again, MCC was selected by all participants in 11 out of 20 occasions (marked in blue in Table 4).

Question	MCN	MCO	MCC	Number of answers
1	0	0	5	5
2	1	0	4	5
3	0	2	3	5
4	0	0	5	5
5	0	0	5	5
7	3	0	2	5
8	0	0	5	5
10	0	0	5	5
11	1	0	4	5
12	1	2	2	5
14	0	1	5	6
15	4	0	2	6
16	3	2	1	6
17	0	1	5	6
18	0	1	5	6
20	2	1	2	5
21	0	1	5	6
22	2	1	3	6
23	0	1	5	6
24	0	1	5	6
TOTAL	17	14	78	

Table 4. Monolinguals' answers. General tendencies and deviations marked.

4.3. Comparison of the results of bilingual and monolingual participants

The first difference to be noted between both groups of informants is that bilinguals have a higher tendency to choose more than one option. Proof of this is that all the selected options of bilinguals add up to 122 and only 109 by monolinguals. Only one of the monolingual participants selected two options in 10 questions, this makes the numbers rise, but tendencies stay the same.

As it can be observed in Tables 1-4, there are only two questions (2 and 12) in which the answers of both groups are exactly the same. Question 2 follows the main tendency and MCC is the most selected option in both cases. As for question 12, MCC is selected as many times as MCO. The answers for this question are sentences describing stationary location and, as seen in question 15, these kind of sentences stand out over the general

tendency. In both groups, questions 7, 15 and 16 are the ones that stand out the most over the general tendency for the different reasons stated above. However, in question 16, bilinguals, unlike monolinguals, select MCC as many times as MCN. In both groups, MCO is the least common answer and more than 2 participants per question select it.

All the participants of both groups have selected an MCC answer (with or without another response) in 11 out of 20 questions (marked in blue in Tables 2 and 4). 9 out of these 11 questions are the same for both groups (4, 5, 8, 10, 17, 18, 21, 23 and 24). Most of these sentences contain the words 'box' or 'ball' as a DO and in all of them (except for question 24) the MCO and MCN structure is 'Something+ Go + Preposition', 'Someone + Put + Something + Somewhere'.

5. Discussion

Following the hypothesis that language helps speakers shape their view of the world (Lee Whorf, 1956; Jakobson, 1959; Boas, 1966; Slobin, 1996a), this paper aimed to shed light on how bilingual English-Spanish native speakers express motion events in English. The analysis of the expression of motion events will help us establish if the influence of Spanish modifies, and if it does to what extent, their perception of these events.

English and Spanish belong to two different types of languages: satellite-framed languages and verb-framed languages, respectively. (Talmy, 1985). In this study we considered the expression of two meaning components: manner and cause. These components are expected to be conflated in the verb in the case of English and are expected to be expressed as adjuncts, if at all, in Spanish.

Thus, in order to fulfil our objective, the first research question we posed was '*Do native English-Spanish bilinguals express manner and cause of a motion event in English in the same way English monolinguals do?*' The general tendencies observed in the results

(Section 4) show that they do. Our results show that both, bilinguals and monolinguals, chose answers in which manner or cause of motion was conflated in the main verb. In fact, surprisingly enough, they did more often than the monolinguals. Thus, monolinguals chose the MCC answer 78% of times and bilinguals 84%. Even though there is a slight difference in the percentages (6%) it cannot be considered significant, as we have seen (Section 4).

Talmy's proposal (1985) stated that English speakers tend to express manner or cause of motion events conflated in the verb and that any other option may not sound natural to them. In general, our findings are in line with Talmy's proposal. However, because of the one participant that chose two answers in half of the items of the task, the ratio of times MCO was chosen is similar to the ratio of the bilinguals. Furthermore, on 17 out of 100 occasions they selected a sentence in which neither manner nor cause of motion were expressed. As explained before (see Section 4), monolinguals chose MCC on some questions (7, 15 and 16, mostly) because of reasons such as lexical repetition in the answers.

Regarding Spanish, Slobin (1996b, 2004) showed that Spanish speakers do not express manner or cause of motion as often as English speakers do. However, his paper does not deal with Spanish speakers who also speak English as a mother tongue. Our work proves that native English-Spanish bilinguals express manner and cause of motion in English in the same way English monolinguals do. Thus, this study contributes to the line of research initiated by Slobin (2004) by providing data about native English-Spanish bilingual speakers. These data prove that even though Spanish might be considered their L1 (since all our bilingual subjects have been raised and educated in Spanish / Catalan), when they describe a motion event in English, they prefer the English conceptualization.

From these data, other conclusions can be drawn, for example, it could be argued that the Separate Development Hypothesis (De Houwer, 1990) better describes reality than the Fusion Hypothesis (Volterra and Taeschner, 1939) or the Formal Complexity Hypothesis (Amberg, 1987; Lindholm 1980 and Slobin, 1973). The Separate Development Hypothesis (De Houwer, 1990) defended the idea that BFLA children acquire both of their mother tongues as two different sets of linguistic elements and that a bilingual child can be defined as ‘two monolingual children in one’ (De Houwer, 1990: 339). Given the general tendency of both groups to choose MCC answers over MCO or MCN, this last hypothesis seems to be the most likely of all three presented as the English performance of bilinguals is not influenced by their knowledge of Spanish.

Our second research question was: *‘If use different mechanisms than the monolinguals, which are they?’*. They do not resort to different mechanisms since the preferred answer in both groups was MCC. However, all the bilingual participants chose more than one option for the same item in some questions. Contrarily, monolingual participants hardly ever selected more than one option (only one of them did, see Appendix C, Participant #05).

The combination bilinguals chose the most was MCC and MCN. Thus, we can conclude that our bilingual participants would rather not express these meaning components than express them as adjuncts. This finding is in line with Slobin’s (2004) results since he observed that Spanish speakers do not express manner or cause of motion as frequently as English speakers. However, the general tendency observed in our study shows that all the participants preferred the English mechanism. For this reason, as mentioned above, our results are in line with the postulates defended in the Separate Development Hypothesis: when they speak English, they think like an English monolingual.

Our third research question: ‘*Do native English-Spanish bilinguals have two distinct world-views related to each of the languages they speak?*’ is closely related to what has just been discussed in our second research questions. According to the Sapir-Whorf Hypothesis (Section 2.1.1), language influences the way in which we perceive reality and, therefore, an English speaker may not conceptualise reality as a Spanish speaker. Slobin (1996a) pointed out that this is only true when a language is acquired as an L1. In this vein, we believe that our bilingual participants should have both conceptualizations of motion events since they have two mother tongues.

According to the results presented in this paper, native English-Spanish bilinguals have, indeed, two different world-views. This can be argued because, in some cases, they do not make a distinction between MCC and MCN answers (10 times out of the 18 two answers were chosen for one item). These findings, apart from indicating that bilingual native speakers have two distinct world-views, prove that these views are not mutually exclusive. This would explain why, when choosing two answers, the most common combination was MCC+MCN: as Spanish speakers, manner and cause or motion may not be a crucial aspect to convey, but as English speakers, they also see manner and cause of motion as something that needs to be expressed.

As a consequence of the results obtained, it can also be argued that the less radical view of the Sapir-Whorf Hypothesis (linguistic relativism) is more plausible than linguistic determinism. If the latter was possible, the bilingual subjects would not have chosen MCC and MCN together as they express two contradictory world-views: one in which the manner or cause of motion is crucial and one in which they are not. Therefore, despite the fact that seems that a language guides its speakers towards certain descriptions of reality (the general tendency for both groups was to notice and express either manner or cause), it does not mean that other views are not possible when using that language.

Notwithstanding, the affirmation that bilinguals have two distinct world-views is only made on the basis of the results of this paper which intends to contribute to the on-going investigation in the field; more data would have to be collected in order to corroborate our findings.

All in all, the results show that the general tendency is for native English-Spanish bilinguals to express manner and cause of motion in the same way as English monolinguals: by conflating them in the verb. The differences between both groups are minimal and bilinguals seem to have two different interacting world views despite the fact that the grammar of their both mother tongues functions independently.

6. Conclusion

This paper aimed to investigate the expression of manner and cause by native English-Spanish bilinguals in comparison to English monolinguals. This study, unlike what the initial hypothesis predicted, has confirmed that both groups of speakers preferably express them by their conflation in the main verb of the sentence. Furthermore, the data helped discuss the fact that native bilingual speakers seem to be able to conceptualise reality in as many different ways as mother tongues they speak.

The present paper has some limitations which should be taken into account when considering its outcome and future research papers. First of all, due to the amount of time available, no more than five subjects per group could be analysed. It would be advisable that, if the study were to be replicated, the task should be completed by larger groups of participants. Secondly, the extension of this paper did not allow for a more exhaustive literature review which could have been more extensive since the topic under study is related to diverse areas of research.

As lines for future research, this paper leaves different topics open for further discussion. A line of research could be to follow a qualitative approach through personal interview with the subjects to look into the reasons why they a specific answer. In addition to this, the study could be carried out to see how the bilingual participants express manner and cause of motion, if they do, in Spanish in comparison to Spanish monolinguals. In order to collect this information, the use of open answers could allow a more natural approach. These data could be compared to data we have already available and it would help us obtain a broader picture of the real situation.

List of references

- Agar, M. (1994). *Language shock: Understanding the Culture of Conversation*. United States of America: HarperCollins Publishers.
- Amberg, L. (1987). *Raising Children Bilingually: The Pre-school Years*. Clevedon: Multilingual Matters.
- Bennett-Kastor, T. (2002). The 'Frog Story' Narrative of Irish-English Bilinguals. *Bilingualism: Language and Cognition* 5:2, 131-146.
- Bergman, C. (1976). Interference versus independent development in infant bilingualism. In G.D. Kever, R.V. Teschner and S. Viera (Eds.), *Bilingualism in the Bicentennial and Beyond*. (pp.86-96). New York: Bilingual Press.
- Bergman, C. (1977). *Problems in the Developmental Psycholinguistics of Bilingualism: Language Acquisition and Language Use*. Unpublished Ph.D. thesis. San Diego, CA: University of California.
- Boas, F. (1966). Introduction to Handbook of Indian American Languages. In J.W. Powell, *Indian Linguistic Families of America North of Mexico*. Lincoln: University of Nebraska Press.
- Cadierno, T., & Ruiz, L. (2006). Motion events in Spanish L2 acquisition. *Annual Review of Cognitive Linguistics*, 4: 183–216.
- De Houwer, A. (1990). *The Acquisition of Two Languages from Birth: A Case Study*. Cambridge: Cambridge University Press.
- De Houwer, A. (2005). Early Bilingual Acquisition: Focus on Morphosyntax and the Separate Development Hypothesis. In J. Kroll and A. de Groot (Eds.), *Handbook of Bilingualism* (pp. 30-48). New York: Oxford University Press.
- Deuchar, M. (1992). Can Government and Binding Theory Account for Language Acquisition? In R. Vide (Ed.), *Lenguajes Naturales y Lenguajes Formales VIII* (pp.273-279). Barcelona, Spain: Universitat de Barcelona.
- Deuchar, M. and Quay, S. (1998). One versus Two systems in Early Bilingual Syntax: Two Versions of the Question. *Bilingualism: Language and Cognition*, 1, 232-243.
- Deuchar, M. and Quay, S. (2000). *Bilingual Acquisition: Theoretical Implications of a case study*. Oxford, U.K.: Oxford University Press.
- Deutscher, G. (2010). *Does your Language Shape How You Think?* New York Times.
- Grosjean, F. (1982). *Life with Two Languages*. Cambridge, MA: Harvard University Press.
- Jakobson, R. (1959). Boas' View of Grammatical Meaning. *American Anthropologist* 61, 139-145.

- Kang, J.Y. (2003). On the Ability to Tell Good Stories in Another Language: Analysis of Korean EFL Learners' Oral 'Frog Story' Narratives. *Narrative Inquiry* 13:1, 127-149.
- Krasinski, E. (1995). The Development of Past Marking in a Bilingual Child and the Punctual-Nonpunctual Distinction. *First Language*, 15, 277-300.
- Levin, B. and Rappaport, M. (2015). *Lexicalization Patterns*. Retrieved from <http://web.stanford.edu/~bcelevin/lexpat15.pdf> (Accessed: 6th of April 2017).
- Lindholm, K. (1980). Bilingual Children: Some Interpretations of Cognitive and Linguistic Development. In Nelson (Ed.), *Children's Language, Volume 2*. (pp.215-266). New York: Gardner Press.
- Lindholm, K. and Padilla, A. (1978a). Child Bilingualism: Report on Language Mixing, Switching and Translations. *Linguistics*, 211: 23-44.
- Lindholm, K. and Padilla, A. (1978b). Language Mixing in Bilingual Children. *Journal of Child Language*, 5: 327-335.
- Macnamara, J. (1970). Bilingualism and Thought. In J. Alatis (Ed.), *Georgetown University 21st Annual Round Table, Volume 23*. (pp. 25-40). Washington, D.C.: Georgetown University Press.
- Macnamara, J. (1991). Linguistic Relativity Revisited. In R. Cooper and B. Spolsky (Eds.), *The Influence of Language on Culture and Thought: Essays in Honour of Joshua A. Fishman's 65th Birthday*. (pp. 45-60). Berlin, Germany: Mouton de Gruyter.
- Mayer, M. (2003 [1969]). *Frog, where are you? (A Boy, a Dog and a Frog)*. New York: Dial Books for Young Readers.
- Meisel, J. (1989). Early Differentiation of Languages in Bilingual Children. In K. Hyldenstam and L. Olber (Eds.), *Bilingualism across the Lifespan. Aspects of Acquisition, Maturity and Loss* (pp.13-40). Cambridge: Cambridge University Press.⁷
- Meisel, J. (2001). The simultaneous Acquisition of Two First Languages: Early Differentiation and Subsequent Development of Grammars. In J. Cenoz and F. Genesee (Eds.), *Trends in Bilingual Acquisition. Volume I*. (pp.11-41). Amsterdam: John Benjamins Publishing Company.
- Ronjat, J. (1913). *Le Développement du Langage Observé chez un Enfant Bilingue*. Paris: Champion.
- Slobin, D. I. (1973). Cognitive prerequisites for the development of grammar. In C. Ferguson and D. Slobin (Eds.), *Studies of Child Language Development*. (pp. 175-208). New York: Holt, Rinehart, and Winston.

- Slobin, D. I. (1996a). From “Thought and Language” to “Thinking for Speaking”. In J. Gumperz and S. C. Levinson (Eds.), *Rethinking Linguistic Relativity* (pp. 70-96). Cambridge: Cambridge University Press.
- Slobin, D. I. (1996b). Two Ways to Travel: Verbs of Motion in English and Spanish. In M. Shibatani and S. A. Thompson (Eds.), *Grammatical Constructions: Their form and meaning* (pp. 195-219). Oxford: Clarendon Press.
- Slobin, D. I. (2004). The Many Ways to Search for a Frog: Linguistic Typology and the Expression of Motion Events. In S. Strömquist and L. Verhoveen (Eds.), *Relating Events in Narrative, Volume 2: Typological and Contextual Perspectives* (pp. 219–257). United States of America: Lawrence Erlbaum Associates.
- Talmy, L. (1973). The Basis for a Crosslinguistic Typology of Motion/Location: Part I, *Working Papers on Language Universals* 11 (pp. 23-83). Stanford: Stanford University.
- Talmy, L. (1985). Lexicalization patterns: semantic structure in lexical forms. In T. Shopen (Ed.), *Language Typology and Syntactic Description, Volume 3: Grammatical categories and the lexicon* (pp. 57-149). Cambridge: Cambridge University Press.
- Talmy, L. (1991). Path to Realization: A Typology of Event Conflation. *Proceedings of the Seventeenth Annual Meeting of the Berkeley Event Structure*, 480–519.
- Talmy, L. (2003a). Lexicalization patterns. In L. Talmy, *Towards a Cognitive Semantics, Volume II: Typology and Process in Concept Structuring* (pp. 21-146). Cambridge: The MIT Press.
- Talmy, L. (2003b). A Typology of Event Integration. In L. Talmy, *Towards a Cognitive Semantics, Volume II: Typology and Process in Concept Structuring* (pp. 213-288). Cambridge: The MIT Press.
- Volterra, V., and Taeschner, T. (1978). The Language Acquisition and Development of Language by Bilingual Children. *Journal of Child Language*, 5, 311-326.
- Whorf, B. L. (1956). Linguistics as an exact science. In J. B. Carroll (Ed.), *Language thought, and reality: selected writings of Benjamin Lee Whorf*. (pp. 220-232).
- Wienold, G. (1995) Lexical and Conceptual Structures in Expressions for Movement and Space: With Reference to Japanese, Korean, Thai and Indonesian as Compared to English and German. In U. Egli, P.E. Pause, C. Schwarze, A. Von Stechow and G. Wienold (Eds.), *Lexical Knowledge in the Organization of Language* (pp. 301-340). Amsterdam: John Benjamins.
- Zlatev, J. & Yangklang, P. (2004). A third way of travel: the place of Thai in motion-event typology. In Strömquist, S. & Verhoeven, L. (Eds.), *Relating events in narrative: topological & contextual perspectives*. (pp. 159-90). Mahwah, NJ: LEA Publishers.

APPENDIX A: Task and background questionnaire

Task

*Each one of the following questions has to be answered after watching a picture or a short video. You can **SELECT AS MANY OPTIONS AS YOU WANT** to answer each question. There are not right or wrong answers, just **CIRCLE THE LETTER** of the sentence/s that you would be most likely to use to describe what you see in the videos or pictures.*

1. Which of these sentences would you use to describe the action you have just seen?
 - a. He blew the feather off his plate.
 - b. He removed the feather from his plate.
 - c. He removed the feather from his plate by blowing on it.

2. Which of these sentences would you use to describe the action you have just seen?
 - a. He removed the cork of the bottle by popping it.
 - b. He popped the cork out of the bottle.
 - c. He removed the cork of the bottle.

3. Which of these sentences would you use to describe the action you have just seen?
 - a. The napkin fell off the table because of the wind blowing on it.
 - b. The napkin blew off the table.
 - c. The napkin fell off the table.

4. Which of these sentences would you use to describe the action you have just seen?
- The ball rolled down the hill.
 - The ball went down the hill rolling.
 - The ball went down the hill.
5. Which of these sentences would you use to describe the action you have just seen?
- He moved the box into the room.
 - He threw the box into the room.
 - He moved the box into the room by throwing it.
6. Which of these sentences would you use to describe the action you have just seen?
- She was doing the dishes.
 - She was washing the dishes.
 - She was cleaning the dishes.
7. Which of these sentences would you use to describe the action you have just seen?
- The girl went down the slide sliding.
 - The girl slid down the slide.
 - The girl went down the slide.
8. Which of these sentences would you use to describe the action you have just seen?
- The ball went down the hill bouncing.
 - The ball went down the hill.
 - The ball bounced down the hill.

9. Which of these sentences would you use to describe the action you have just seen?

- a. Michael Jackson was moonwalking.
- b. Michael Jackson was dancing.
- c. Michael Jackson was doing a moonwalk.

10. Which of these sentences would you use to describe the action you have just seen?

- a. He pushed the box into the room.
- b. He moved the box into the room.
- c. He moved the box into the room pushing it.

11. Which of these sentences would you use to describe the action you have just seen?

- a. He went down the stairs running.
- b. He ran down the stairs.
- c. He went down the stairs.

12. Which of these sentences would you use to describe the picture you have just seen?

- a. The rope crossed the room hanging from two clothes pegs.
- b. The rope crossed the room.
- c. The rope hang across the room from two clothes pegs.

13. Which of these sentences would you use to describe the action you have just seen?

- a. The young man and the boy were speaking.
- b. The young man and the boy were talking to each other.
- c. The young man and the boy were chatting.

14. Which of these sentences would you use to describe the action you have just seen?

- a. He went down the stairs.
- b. He limped down the stairs.
- c. He went down the stairs limping.

15. Which of these sentences would you use to describe the picture you have just seen?

- a. The lamp was on the table.
- b. The lamp laid on the table.
- c. The lamp was on the table, lying there.

16. Which of these sentences would you use to describe the action you have just seen?

- a. He gave her a beer.
- b. He gave her a beer by sliding it.
- c. He slid her a beer.

17. Which of these sentences would you use to describe the action you have just seen?

- a. He put the nail into the board.
- b. He knocked the nail into the board hammering it.
- c. He hammered the nail into the board.

18. Which of these sentences would you use to describe the action you have just seen?

- a. She moved the ball into the room.
- b. She bounced the ball into the room.
- c. She moved the ball into the room by bouncing it.

19. Which of these sentences would you use to describe the action you have just seen?

- a. The dog was staring at the TV.
- b. The dog was looking at the TV.
- c. The dog was watching TV.

20. Which of these sentences would you use to describe the action you have just seen?

- a. Paint covered the sheet of paper.
- b. Paint covered the sheet of paper in streaks.
- c. Paint streaked the sheet of paper.

21. Which of these sentences would you use to describe the action you have just seen?

- a. She moved the ball into the room.
- b. She slid the ball into the room.
- c. She moved the ball into the room by sliding it.

22. Which of these sentences would you use to describe the action you have just seen?

- a. He cut the tree down by chopping it.
- b. He chopped the tree down.
- c. He cut the tree down.

23. Which of these sentences would you use to describe the action you have just seen?

- a. He moved the box into the room.
- b. He kicked the box into the room.
- c. He moved the box into the room by kicking it.

24. Which of these sentences would you use to describe the action you have just seen?

- a. He went down the stairs jumping.
- b. He went down the stairs.
- c. He jumped down the stairs.

25. Which of these sentences would you use to describe the picture you have just seen?

- a. He was relaxing in an armchair.
- b. He was sitting in an armchair.
- c. He was resting in an armchair.

Background questionnaire

After having filled in the previous task, you need to answer the following questions about your background. The information provided in this questionnaire is to be used only for a research project carried out by Ariadna Olivares Gil.

1. Name:
2. Age:
3. City of birth:
4. What languages did you speak by the age of four?
5. With whom did you speak each language back then?
6. What language/s do you speak at home?
7. What language/s do you speak at school / work?
8. Do you speak any other language/s? If so, which?
9. What is your mother's L1?

10. What is your father's L1?

11. Do you consider yourself equally fluent in all the languages you know?

a. Yes

b. No

12. Why or why not?

Consent form

By handing in this questionnaire, I agree to take part in this research study and I understand that my name and my specific answers will remain confidential and that I will not be identified in any report or presentation which may arise from the study. I understand that I will not benefit from this study. I hereby give permission for my previous answers to be used for research purposes. Thank you for your collaboration.

APPENDIX B: Consent Form

Dear father/mother/legal tutor,

I am Ariadna Olivares Gil (41010830J), a student at the Universitat Autònoma de Barcelona (Barcelona, Spain) working on a research project to end my degree in English and Spanish philology. This project deals with the expression of manner in English and in Spanish/Catalan and it follows two main studies carried out by Slobin (1996a, 1996b, 2004) and Talmy (1991,1995,1996). For this study, I'm looking for teenagers aged 12 to 15 who speak English only or who are bilingual (English-Spanish/Catalan) speakers.

The teenagers will be asked to fill in an online task, accessible through a link that can be found at the end of this request form. In this task, they will have to watch some short videos or images and then choose a sentence from the ones provided in each of the 25 questions of the survey to describe what they have just seen. These sentences have been taken and adapted from Talmy (1985).

It is of vital importance that your child does not know anything about the purpose of the project because, otherwise, his or her answers could be conditioned.

At the end of the task, there is a short questionnaire to gather personal information (name, age, languages spoken, etc.) and create a profile of each participant. This information is completely confidential and will solely be used for the purpose of this investigation.

You are hereby informed that the participation in this study will not be compensated economically or in any other way.

If you agree with everything stated above and you want to authorize your son or daughter to answer the questionnaire and the task, please write your full name and an ID number, as well as the date and place of signature, in the space provided. Send this form filled in as an attached document to: ariadnatfg@gmail.com.

Name of the teenager:

Name and passport or NIE or DNI / ID number of the mother/father/legal tutor:

Date and place:

Link: <https://goo.gl/forms/q1Lt9DoJyEXFZONv1>

References

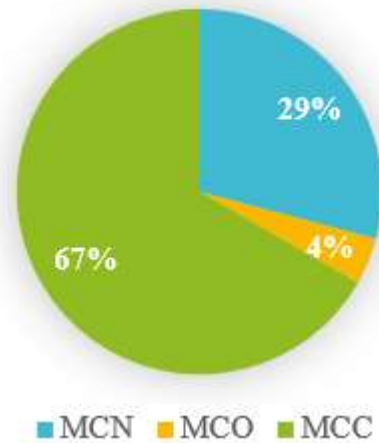
- Slobin, D. I. (1996a). From “Thought and Language” to “Thinking for Speaking”. In J. Gumperz and S. C. Levinson (Eds.), *Rethinking Linguistic Relativity* (pp. 70-96). Cambridge: Cambridge University Press.
- Slobin, D. I. (1996b). Two Ways to Travel: Verbs of Motion in English and Spanish. In M. Shibatani and S. A. Thompson (Eds.), *Grammatical Constructions: Their form and meaning* (pp. 195-219). Oxford: Clarendon Press.
- Slobin, D. I. (2004). The Many Ways to Search for a Frog: Linguistic Typology and the Expression of Motion Events. In S. Strömquist and L. Verhoveen (Eds.), *Relating Events in Narrative, Volume 2: Typological and Contextual Perspectives* (pp. 219–257). United States of America: Lawrence Erlbaum Associates.
- Talmy, L. (1985). Lexicalization patterns: semantic structure in lexical forms. In T. Shopen (Ed.), *Language Typology and Syntactic Description, Volume 3: Grammatical categories and the lexicon* (pp. 57-149). Cambridge: Cambridge University Press.
- Talmy, L. (1991). Path to Realization: A Typology of Event Conflation. *Proceedings of the Seventeenth Annual Meeting of the Berkeley Event Structure*, 480–519.
- Talmy, L. (1996). The Windowing of Attention in Language. In M. Shibatani and S. A. Thompson (Eds.), *Grammatical Constructions: Their form and meaning* (pp. 235-287). Oxford: Clarendon Press.

APPENDIX C: Results

Bilingual participants

#A	MCN	MCO	MCC
1			X
2			X
3	X		
4			X
5			X
7			X
8			X
10			X
11			X
12			X
14			X
15	X	X	
16	X		
17	X		X
18			X
20	X		
21	X		X
22	X		X
23			X
24			X
TOTAL	7	1	16

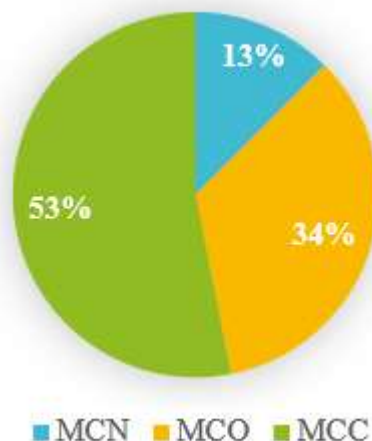
Participant #A



Participant #A	
<i>Gender</i>	Female
<i>Age</i>	13
<i>L1</i>	Spanish, Catalan and English
<i>Other languages</i>	Learning French
<i>Speaks English at home</i>	Yes
<i>Speaks Spanish at home</i>	No
<i>Speaks English at school</i>	No
<i>Speaks Spanish at school</i>	Yes
<i>Mother's L1</i>	English
<i>Father's L1</i>	English

#B	MCN	MCO	MCC
1		X	
2			X
3		X	
4		X	X
5		X	X
7	X		X
8		X	X
10		X	X
11	X	X	X
12		X	
14		X	X
15			X
16	X	X	X
17	X		X
18			X
20			X
21			X
22		X	X
23			X
24			X
TOTAL	4	11	17

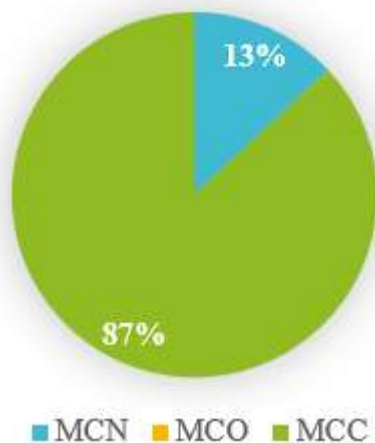
Participant #B



Participant #B	
Gender	Male
Age	12
L1	Spanish, Catalan and English
Other languages	None
Speaks English at home	Yes
Speaks Spanish at home	No (but he speaks Catalan)
Speaks English at school	No
Speaks Spanish at school	No (but she speaks Catalan)
Mother's L1	English
Father's L1	Catalan

#C	MCN	MCO	MCC
1			X
2			X
3			X
4			X
5			X
7	X		X
8			X
10			X
11			X
12			X
14			X
15	X		X
16	X		X
17			X
18			X
20			X
21			X
22			X
23			X
24			X
TOTAL	3	0	20

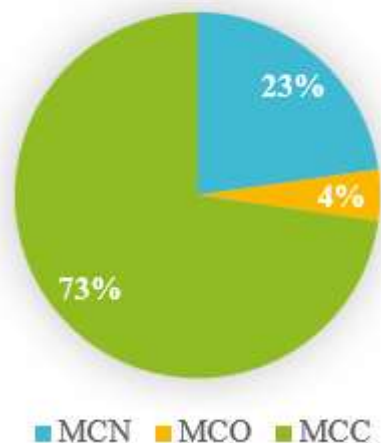
Participant #C



Participant #C	
Gender	Male
Age	13
L1	Spanish, Catalan and English
Other languages	None
Speaks English at home	Yes
Speaks Spanish at home	Yes
Speaks English at school	Yes
Speaks Spanish at school	Yes
Mother's L1	Spanish
Father's L1	English

#D	MCN	MCO	MCC
1			X
2	X		
3			X
4			X
5			X
7	X		
8			X
10			X
11			X
12	X		
14			X
15	X		
16	X		X
17			X
18			X
20		X	
21			X
22			X
23			X
24			X
TOTAL	5	1	16

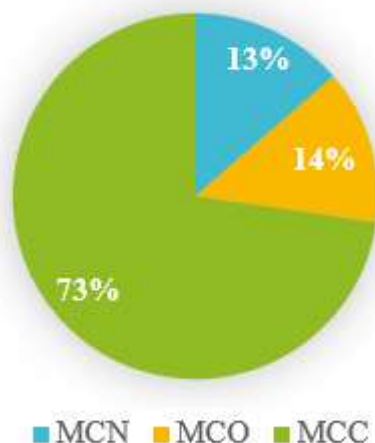
Participant #D



Participant #D	
<i>Gender</i>	Male
<i>Age</i>	15
<i>L1</i>	Spanish, Catalan and English
<i>Other languages</i>	None
<i>Speaks English at home</i>	Yes
<i>Speaks Spanish at home</i>	No (but he speaks Catalan)
<i>Speaks English at school</i>	No
<i>Speaks Spanish at school</i>	No (but he speaks Catalan)
<i>Mother's L1</i>	Catalan
<i>Father's L1</i>	English

#E	MCN	MCO	MCC
1			X
2			X
3			X
4			X
5			X
7	X		
8			X
10			X
11			X
12		X	
14		X	
15	X	X	
16			X
17			X
18			X
20	X		X
21			X
22			X
23			X
24			X
TOTAL	3	3	16

Participant #E

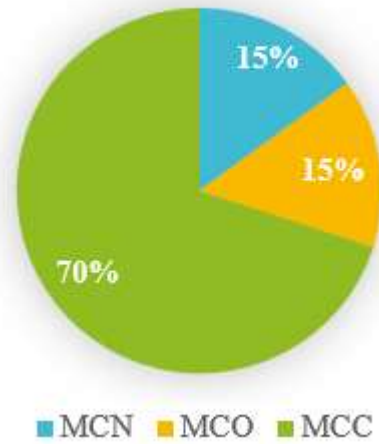


Participant #E	
Gender	Female
Age	15
L1	Spanish, Catalan and English
Other languages	Learning French
Speaks English at home	Yes
Speaks Spanish at home	Yes
Speaks English at school	Yes
Speaks Spanish at school	Yes
Mother's L1	English
Father's L1	Galician and Spanish

Monolingual participants

#01	MCN	MCO	MCC
1			X
2			X
3		X	
4			X
5			X
7	X		
8			X
10			X
11	X		
12		X	
14			X
15	X		
16		X	
17			X
18			X
20			X
21			X
22			X
23			X
24			X
TOTAL	3	3	14

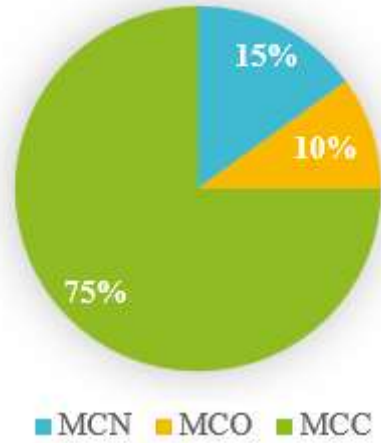
Participant #01



Participant #01	
Gender	Male
Age	14
L1	English
Other languages	Learning French
Speaks English at home	Yes
Speaks Spanish at home	No
Speaks English at school	Yes
Speaks Spanish at school	No
Mother's L1	English
Father's L1	English

#02	MCN	MCO	MCC
1			X
2			X
3		X	
4			X
5			X
7			X
8			X
10			X
11			X
12		X	
14			X
15	X		
16			X
17			X
18			X
20	X		
21			X
22	X		
23			X
24			X
TOTAL	3	2	15

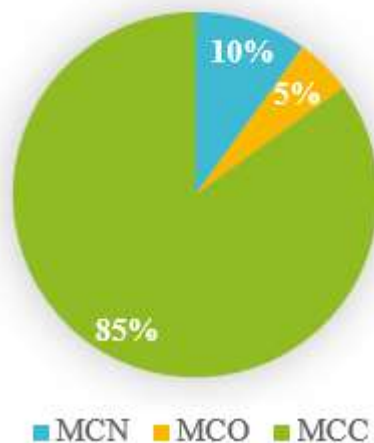
Participant #02



Participant #02	
Gender	Male
Age	14
L1	English
Other languages	Learning French
Speaks English at home	Yes
Speaks Spanish at home	No
Speaks English at school	Yes
Speaks Spanish at school	No
Mother's L1	English
Father's L1	English

#03	MCN	MCO	MCC
1			X
2			X
3			X
4			X
5			X
7	X		
8			X
10			X
11			X
12			X
14			X
15			X
16	X		
17			X
18			X
20		X	
21			X
22			X
23			X
24			X
TOTAL	2	1	17

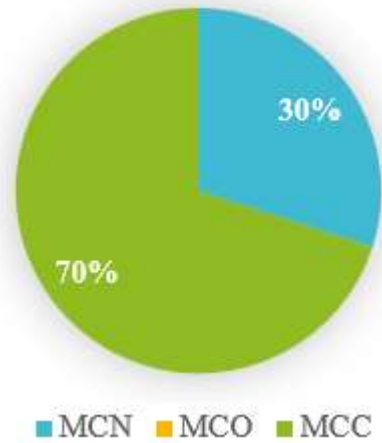
Participant #03



Participant #03	
Gender	Female
Age	12
L1	English
Other languages	None
Speaks English at home	Yes
Speaks Spanish at home	No
Speaks English at school	Yes
Speaks Spanish at school	No, but she is learning it.
Mother's L1	English
Father's L1	English

#04	MCN	MCO	MCC
1			X
2	X		
3			X
4			X
5			X
7			X
8			X
10			X
11			X
12	X		
14			X
15	X		
16	X		
17			X
18			X
20	X		
21			X
22	X		
23			X
24			X
TOTAL	6	0	14

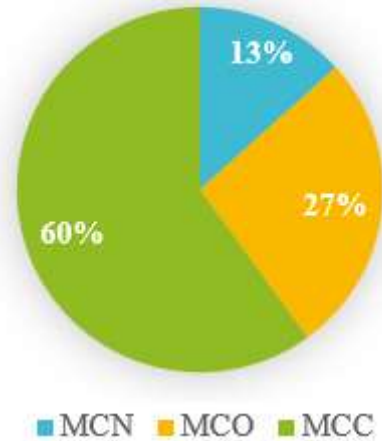
Participant #04



Participant #04	
Gender	Female
Age	12
L1	English
Other languages	None
Speaks English at home	Yes
Speaks Spanish at home	No
Speaks English at school	Yes
Speaks Spanish at school	No
Mother's L1	English
Father's L1	English

#05	MCN	MCO	MCC
1			X
2			X
3			X
4			X
5			X
7	X		
8			X
10			X
11			X
12			X
14		X	X
15	X		X
16	X	X	
17		X	X
18		X	X
20	X		X
21		X	X
22		X	X
23		X	X
24		X	X
TOTAL	4	8	18

Participant #05



Participant #05	
Gender	Female
Age	14
L1	English
Other languages	None
Speaks English at home	Yes
Speaks Spanish at home	No
Speaks English at school	Yes
Speaks Spanish at school	No
Mother's L1	English
Father's L1	English

APPENDIX D: Media

Find attached on the inside part of the back cover of this paper a DVD with 24 files of videos and images the participants were asked to visualize before each question of the task. The files are named after the question they correspond to. If you are reading a digital copy of this paper, please refer to this link to visualize this appendix:

<https://drive.google.com/open?id=0B23gTu10CmKkOW5kcjN3czFKS1E>