Verbs of sensory perception

An English-Spanish comparison

Ana Rojo and Javier Valenzuela
Universidad de Murcia

Slobin (1996, 1997) has pointed out the differences between Spanish and English verbs of motion with regard to the expression of elements such as "Path of motion" or "Manner of motion". Generally speaking, English verbs incorporate manner to their core meaning while Spanish verbs tend to incorporate Path, expressing Manner by means of an additional complement. Comparing English motion events and their translation into Spanish in several novels, Slobin found out that only 51% of English manner verbs were translated into Spanish manner verbs (Slobin 1996), the rest being neutralized or omitted. In this work, we apply Slobin's analysis to sensory verbs of perception in English and Spanish. Our paper analyzes the conflation patterns of sensory verbs of perception in English and Spanish in order to investigate possible changes in the informational load during the translation process. For this purpose, we have extracted 200 sensory verbs of perception from two English and two Spanish novels and their respective translations. The paper examines instances of gain or loss of information during the translation process, as well as whether the translation shifts provide evidence for a difference in the way the perception event is structured in both languages

Keywords: perception verbs, conflation patterns, English/Spanish

1.   Introduction

In his influential article "Two ways to travel: verbs of motion in English and Spanish", the psycholinguist Dan Slobin (Slobin 1996) studied informational differences in the translation of verbs of motion between English and Spanish. Slobin took as a starting point Talmy's typological distinction between "verb-framed languages" and "satellite-framed languages" (Talmy 1991). Talmy noted that languages differ in their expression of motion events. One group of

satellite-framed languages ↓ Manner is conflated	verb-framed languages ↓ Path is conflated
English *limp, tip-toe, crawl*	Spanish *subir, bajar, entrar, salir*

Figure 1. Distinction between satellite-framed and verb-framed languages

languages tends to incorporate manner to the lexical meaning of motion verbs (i.e. they "conflate" manner information). Thus, English verbs such as *slide, crawl,* or *tip-toe* express motion and manner simultaneously. In this group of languages (which comprises not only English but many other languages, e.g. Germanic languages such as German or Swedish), information regarding path is expressed by an external element, typically a preposition or "satellite" (e.g. *go **up/down/in/out***, etc.), hence their name "Satellite-framed languages". A different group of languages (which includes Romance languages, such as Italian or Spanish) does not incorporate manner to the meaning of motion verbs so frequently. These languages tend to conflate information about the trajectory or "path" of the motion event (e.g. Spanish *subir, bajar*, etc.). Talmy named this type of languages "Verb-framed languages".

Slobin observed that these differences between both types of languages caused problems when translating motion verbs between English and Spanish. It is frequently the case that one single verb in English (expressing simultaneously manner and motion), has to be translated using two different elements, a verb to express the motion and a different element (normally an adverbial) to include information about manner. Conversely, the information contained in Spanish motion verbs (i.e. path and motion), has to be separated into different lexical elements when translating into English.

A further difference between both types of languages is that satellite-framed languages allow for the expression of complex motion events; they are able to elaborate on the trajectory by adding prepositional phrases which trace the path followed in great detail. For example, in English it is possible to formulate a sentence such as "*The child tip-toed **out of** his room **across** the corridor **into** the kitchen*". Verb-framed languages would have to use different verbs for each "path section" mentioned: cf. Spanish "*El niño **salió** de puntillas de su habitación, **atravesó** el pasillo, y **entró** en la cocina*".

Slobin (1996) analyzed these differences comparing the translations of motion verbs in a group of English and Spanish novels. He found out that in a high percentage of cases, when translating into Spanish, information about manner tended to be omitted and information about path simplified; on the contrary,

when translating into English, manner was frequently added and information about path was enriched.

Taking Slobin's study as a reference point, Rojo and Valenzuela (1999, 2000, 2001) explored other domains in order to see whether these typological differences had an influence on the translation of other types of verbs between English and Spanish. The domains chosen for study were the *speech event* — verbs of saying — and the *visual perception event* — verbs of seeing -. Our goal was to study any possible gain or loss of information during the translation process. Summarizing the results briefly, we found that the domains of "motion" and "seeing" seemed to behave similarly: information was lost from English into Spanish and gained when going from Spanish into English. However, the domain of "saying" was found to behave differently: information tended to be increased when going from English into Spanish but maintained when going from Spanish into English (cf. Rojo and Valenzuela 1999, 2000, 2001).

In the present study, we intend to carry on with this line of research by examining a different domain: verbs of sensory perception (touch, taste, smell and hearing).[1] We pursue a double goal: (1) to examine the possible loss/gain of information in the translation of verbs of perception between English and Spanish, and (2) to examine whether translation shifts provide evidence for a difference in the way the perception event is structured in both languages.

2.   Material and method

The books used as a corpus for our study include two English novels and two Spanish ones and their respective translations. The novels chosen were the following:

English to Spanish
KUREISHI, HANIF (1990). *The Buddha of Suburbia*. London/Boston, Faber and Faber (1990). [*El Buda de los Suburbios*, trans. Mónica Martín Berdagué, Barcelona: Editorial Anagrama, 1992].
DAHL, ROALD (1975). *Charlie and the chocolate factory*, London: Puffin Books, [*Charlie y la fábrica de chocolate*, trans. Verónica Head, Barcelona: Alfaguara, 1978]

Spanish to English
ESQUIVEL, LAURA (1989). *Como agua para chocolate*. Barcelona: Editorial Mondadori. [*Like Water for Chocolate,* trans. Carol & Thomas Christensen, New York: Uncle Books, 1992]

Vargas Llosa, Mario (1998). *Los Cuadernos de Don Rigoberto*. Barcelona: Editorial Alfaguara. [*The Notebooks of Don Rigoberto*, trans. Edith Grossman, London: Faber and Faber, 1999].

These novels were selected taking into account their subject matter; in each of them, perception played an important role in the story (e.g. taste in *Charlie and the Chocolate Factory* or touch in *Los Cuadernos de Don Rigoberto*).

Seventy-five verbs of sensory perception were extracted from each novel (i.e. a total of 300); verbs were listed in order of appearance and the context of each verb was noted down for both source and target texts. In this way we constructed a parallel database, structured as follows:

SOURCE TEXT: The Buddha of Suburbia
TARGET TEXT: El Buda de los suburbios
VERB: *smell*
SENSE: Smell
SOURCE EXAMPLE: She sat impassively, smelling of patchouli, twice pulling a strand of hair out of her eyes while he went on
TARGET EXAMPLE: Ella, en cambio, estaba allí sentada, indiferente, con su olor a pachulí, y dos veces se apartó de los ojos un mechón de pelo mientras él seguía leyendo
ST PAGE NUMBER: 36
TT PAGE NUMBER: 52

We also included some cases in which the original text contained no perception verb but the translator nevertheless used a perception verb in his/her translation. This was especially frequent in the case of verbs of hearing, as we shall see in the results section (3.2.2.1). For example:

SOURCE TEXT: The Buddha of Suburbia
TARGET TEXT: El Buda de los suburbios
VERB: Ø
SENSE: Hearing
SOURCE EXAMPLE: I suspected he liked these ink-stained accounts beliefs
TARGET EXAMPLE: Tengo la ligera sospecha de que le gustaba *escuchar* aquellos relatos con borrones de tinta
ST PAGE NUMBER: 87
TT PAGE NUMBER: 115

3.   Results

In order to pursue our double goal, the analysis of the results has been organised in two different sections. To quantify possible informational changes, the results were first analysed quantitatively (Section 3.1). However, a qualitative analysis seemed more adequate to study the differences in the structure of the perception event. For this reason, Section 3.2 comments on some examples that provide evidence for systematic differences in the way the perception event is structured in English and Spanish.

3.1 Quantitative results

In Appendix I, we include six tables that summarize the results of our study. The first four tables organize the results per novel and show the verbs in the source and target texts. The brackets after each verb specify the number of tokens found in our corpus. The last two tables display a similar organisation but include the results per language (i.e. in both English novels and in both Spanish novels).

Since we randomly collected seventy-five verbs from each novel, each sensory modality had a different weight in the final corpus. Thus, verbs of hearing were much more frequent than the rest of modalities in both languages (53.33% and 40.66% in English and Spanish, respectively). Also, verbs of touch had a bigger representation in the Spanish corpus (40%), which could be due to the dominant role that the sense of touch has in the Spanish novel *Los Cuadernos de Don Rigoberto.*

Regarding the number of verb types found per sensory modality and language, the information is summarized in Table 2.

If we compare the total number of verb types in English or Spanish across the four modalities, the numbers were quite similar (48 vs. 46). Furthermore, when going from Spanish into English, there is no significant difference either in the total number of types (48 vs. 49), which seems to indicate that there was no relevant gain or loss of information. Similarly, when comparing the number

Table 1. Composition of the example database

	English	Spanish	Total
Hearing	80 (53.33%)	61 (40.66%)	141 (46,9%)
Smelling	18 (12%)	16 (10.66%)	34 (11.3%)
Touch	19 (12.6%)	60 (40%)	79 (26.3%)
Taste	33 (22%)	13 (8.66%)	46 (15.3%)

Table 2. Types per sensory modality in STs and TTs

	Hearing	Smelling	Touch	Taste	Total
Spanish ST	6	7	27	8	48
English TT	*8*	*6*	*26*	*9*	*49*
English ST	15	8	12	11	46
Spanish TT	*6*	*12*	*9*	*12*	*39*

of types per sensory modality in the Spanish to English translations, the lack of outstanding differences between the figures also supports the lack of informational changes (6 vs. 8 in hearing, 7 vs. 6 in smelling, 27 vs. 26 in touch and 8 vs. 9 in taste).

There is, however, a slight difference when comparing the number of verb types in the English source texts to those in the Spanish target texts. When going from English into Spanish, there is a slight difference in favour of English (46 English types vs. 39 Spanish types in the translation), which at first seems to point to a slight loss of information in the translations. However, when examining each sensory modality separately, it becomes apparent that this difference is mainly caused by verbs of hearing. Moreover, the qualitative analysis of this type of verbs reveals that, as shall be argued later on, more than a real information loss, what we find is a difference in the number of strategies for framing the hearing event (see the discussion in Section 3.2.2 below).

3.2 Qualitative results

In order to complement the quantitative analysis of the results, we also carried out a qualitative study that could allow us to highlight systematic differences in the way the perception event is structured in English and Spanish.

3.2.1 *Informational differences in the translation of sensory verbs*
As mentioned in the previous section, we found that, generally speaking, there was no relevant gain or loss of information when translating from Spanish into English or viceversa, that is, no element of meaning was added or omitted in any systematic way. However, we did find some isolated examples that showed a certain gain/loss of information; these are some of them:

(1) palpar > touch
 Tita tímidamente palpó los duros musculos de los brazos y el pecho de Pedro. (Esquivel 1989: 88)
 Tita timidly touched the hard muscles on Pedro's arms and chest.
 (Esquivel 1992: 98)

Palpar is a verb of SMALL CAPS which includes information about the purpose and duration of the event (roughly, "to touch repeatedly as if looking for information"). Its English counterpart, *touch,* is a more general verb which does not necessarily convey equivalent purpose or iteration meaning nuances. Other possible equivalents in English could be *feel* or *grope*, though, admittedly, neither of them are able to convey the exact range of meaning of *palpar*.

(2)   stink > oler
      it never stank, except of Jeeta's wonderful cooking (Kureishi 1990: 58)
      nunca olía a nada especial, salvo a los maravillosos platos que Jeeta
      preparaba (Kureishi 1992: 80)

This is another example of loss of information; the English verb *stink* is a verb of SMELLING which conveys the notion that the perceived object is unpleasant. In this ocassion it has been translated by the general Spanish verb *oler* ('smell') which is neutral with respect to the evaluation of the stimulus. The addition of the complement *a nada especial* (lit. 'to nothing special') still does not inform of the unpleasantness of the percept.

(3)   Sobar > rub
      ST: cogerle las manos y sobárselas, atolondrado (Vargas-Llosa 1998: 9)
      TT: grasp her hands, and rub them in bewilderment (Vargas-Llosa 1999: 3)

In this context, the Spanish verb *sobar* is a verb of TOUCHING which includes information about duration and intention; its meaning could approximately be paraphrased as "to touch repeatedly a person or a part of a person with lascivious intention". The English verb *rub* means "to move your hand (or an object) back and forwards over the surface of another object, usually pressing down". No reference is made regarding the intention of the action; such information is therefore lost in the English translation.

   In some other examples, instead of a clear loss or gain, we noticed a change in the information communicated by source and target examples.

(4)   amasar > caress
      tal vez Pedro hubiera terminado amasando sin descanso los senos que
      Tita le ofrecía (Esquivel 1989: 63)
      perhaps Pedro would have ended up tirelessly caressing the breasts Tita
      offered him (Esquivel 1992: 67)

The Spanish verb *amasar* in this context means "to massage a part of the body", which activates the image of a firm and vigorous type of touching. On the other hand, the English verb *caress* makes reference to "touch gently and lovingly",

evokes a gentle and delicate act of touching. Thus, the translator, rather than adding or omitting information, has opted for substituting one mode of touching for a different one, activating a slightly different scene.

3.2.2   *Differences in the structuring of the perception event*
In order to study in greater detail whether differences in the linguistic expressions of English and Spanish sensory verbs revealed any differences in the way the perception event was structured, we decided to use a Frame-Semantic approach. In Frame Semantics, words are understood in relation to a underlying structure, the "frame" (other names are "scene" or "schema"), which provides the background needed to grasp their meaning. The usefulness of Frame Semantics for verb analysis has been shown in previous studies (cf. Fillmore 1971, 2000; Fillmore and Atkins 1992, 1994; Rojo and Valenzuela 1998, 1999, 2000, 2001; Valenzuela 1996). Different verbs highlight or foreground different parts of a given frame, even when they are semantically close and belong to the same frame. Looking at which elements of a frame are activated by a verb in a given context can therefore be a useful tool for looking at fine-grained nuances of meaning. In the same way, it is also a useful method for gauging lexical equivalence between words belonging to different languages: two equivalent words should cause a similar activation in the relevant frame.

The perception frame we defined consisted of the frame elements in Table 3.[2]

Table 3. Elements in the perception frame

PERCEPTOR-ACTIVE	Entity that perceives something in an intentional way, e.g. *John* *looked at his girlfriend*
PERCEPTOR-PASSIVE	Entity that perceives something unintentionally, e.g. ***John** saw something moving*
PERCEIVED	The entity that is perceived, e.g. *John looked at **his girlfriend***
MANNER	Manner in which the perception event is carried out, e.g. *John looked **lovingly** at his girlfriend*
ORGAN	The organ used to perceive, e.g. smelling, hearing, etc.
LOCATION OF PERCEPTOR	Location of the entity that perceives the event, e.g. *John smelled the turkey **from his bedroom***
LOCATION OF PERCEIVED	Location of the entity that is perceived, e.g. *The smell was coming **from the kitchen***
PATH	Trajectory followed by the sensory stimulus from its source till the perceptor, e.g. *John could hear the children shouting **through his bedroom window***
SOURCE	Entity that emits or creates the sensory stimulus perceived, e.g. *After two days without a shower, **John** smelled of sweat*

By looking at the ways in which the English and Spanish verbs expressed these frame elements, we were able to establish the following differences.

3.2.2.1 *Perceptor highlighting/backgrounding.* The first difference we found concerned the expression of the PERCEPTOR frame element. We found that in English, the PERCEPTOR is frequently absent from the scene and has to be inferred by the reader, whereas in Spanish, it is usually present either explicitly in the foreground or at least implicitly in the background. This difference in the expression of the perceptor is clearly illustrated in examples (5) and (6):

> (5)   The house was silent except for the distant sound of "A Saucerful of Secrets" coming from the top of the house (Kureishi 1990: 15)
> La casa estaba en silencio y únicamente se oía muy queda "A Saucerful of secrets" procedente del piso de arriba (Kureishi 1992: 24)

In the English sentence, no explicit reference is made to any perceptor; only the hearing stimulus (*the distant sound of "A Saucerful of Secrets"*) and its source (*coming from the top of the house*) are mentioned, and the reader has to construct the whole perception scene by inferring the presence of a perceptor. However, in the Spanish version, the perceptor is activated directly by the use of the verb "*oír*" (*to hear*).

Translating from Spanish into English, the opposite holds true, as seen in example (6):

> (6)   acercó el huevo a su oido y **escuchó** con mas fuerza los pillidos (Esquivel 1989:29).
> She held the egg closer to her ear and the peeping got louder (Esquivel 1992:28).

In the source text, the verb *escuchar* invokes the presence of a perceptor (i.e. its subject). In the English translation, however, the perceptor is excluded from the scene, and the stimulus is foregrounded. This seems to be related to the fact that the nominal construction of the English sentence does not need a subject, while the Spanish use of a verb necessarily activates a subject, which corresponds to the perceptor.

This absence (or backgrounding) of the PERCEPTOR element in English seems to licence certain constructions that are not that frequent in Spanish. One of these constructions is the [*there was* X] construction:[3]

> (7)   there was some muffled arguing (Kureishi 1990: 39)
> oí una discusión apagada (Kureishi 1992: 55)

(8)   there was some chanting music going on (Kureishi 1990: 11)
      se oía una música acompañada de cánticos (Kureishi 1992: 19)

In examples (7) and (8) no PERCEPTOR is mentioned in the source texts, and
the stimulus is presented to the receptor by means of a *there*-existential con-
struction. In both their translation counterparts, the relevant verb of percep-
tion must be present (*oír*), mentioning the PERCEPTOR explicitly (*oí,* example
7) or at least implicitly by the use of the "passive with *se*" (*se oía,* example 8).

3.2.2.2. *Change of Perspective.* Due to these preferences in the highlighting/
backgrounding of the perceptor and perceived elements, we found cases in
which the perspective has been reversed in the translation. For example, in
the case of verbs of hearing, we noticed several cases in which scenes with an
"emission of sound" perspective in English have been transformed to a "recep-
tion of sound" perspective in Spanish. This is illustrated by examples 9 to 12:

(9)   "Karim, Karim", Helen **said** quickly (Kureishi 1990: 39)
      Karim, Karim — **oí** decir a Helen apresuradamente (Kureishi 1992: 55)

(10) But as she **spoke** he did relax slowly (Kureishi 1990: 255)
      Sin embargo, al **oír** su voz, se fue relajando poco a poco (Kureishi 1992:
      328)

(11) I can't **play** my Nat King Cole and Pink Floyd records (Kureishi 1990: 48)
      Ya no puedo **escuchar** mis discos de Nat King Cole ni de Pink Floyd
      (Kureishi 1992: 66)

(12) my voice **sounded** absurdly loud (Kureishi 1990: 14)
      mi tono de voz **se me antojó** absurdamente alto (Kureishi 1992: 23)

In examples (9) and (10), the English source texts use verbs of saying (*say* and
speak, respectively), focusing therefore on the message produced by a speaker;
in their translation counterparts, the perspective is reversed and the receptor of
the message appears in the scene by the use of the verb *oír* (to hear). Examples
(11) and (12) are quite similar, but the verbs used in the source text are general
verbs of emission of sound (*play* and *sound*, respectively) which activate scenes
where the perceptor is backgrounded. On the contrary, in the Spanish version,
the perceptor of the scene stands out in both cases (*escuchar* and *antojarse*,
respectively).

3.2.2.3 *Bidirectionality.* Perception verbs can have at least two different types
of subjects, depending on the frame element they highlight.[4] In one type, the

subject corresponds to the experiencer, which corresponds to the entity that receives and identifies the stimulus, that is the PERCEPTOR. In the second type, subjects are linked to the SOURCE of the stimulus; we can call the first class "reception verbs" and the second "emission verbs". Some verbs can appear with both types of subjects and have accordingly been labelled as "bidirectional": they can be used to express either the reception or the emission of a stimulus. Examples of bidirectional verbs are found in the domain of verbs of smell in both English and Spanish.

(13)   He **smelled** good, of sweat (Kureishi 1990: 239)   [EMISSION]
       Olía bien, a sudor (Kureishi 1992: 308)

(14)   Tita **olía** que los frijoles ya estaban cocidos (Esquivel 1989: 12).
       [RECEPTION]
       She could **smell** that the beans were ready (Esquivel 1992: 7)

In (13), the subject ("he") is the source of the sensory information; it is the entity that emits the smell ("sweat"), and no experiencer is specified. Example (14), however, behaves in a different way; the subject ("Tita"), is the entity that receives the sensory stimulus, that is, the experiencer, and the beans are the entity that emits the smell.

Sometimes, however, the linguistic expression of verbs of smell differs in both languages. For example, in Spanish, a sentence such as (15):

(15)   Olía a sudor

can be interpreted in two different ways: the subject may be understood as receiving the external smell of sweat (that is, the subject is interpreted as an experiencer). Alternatively, the subject can be taken as the source of the stimulus itself, that is, as the entity that "emits" the smell of sweat.

On the contrary, in English, the interpretation of a sentence like "he smelled of sweat" can only be understood as the subject being the entity that emits the smell. In English, thus, we find that the same verb can be used for both modes, but its argument structure is different:

– Smell$_1$ ⟨subj/exp — obj/stim⟩
   – *I could smell the train on him* (Kureishi 1990:3)
– Smell$_2$ ⟨subj/source — *of*-comp/stim⟩
   – *She sat impassively, smelling of patchouli* (Kureishi 1990:36)

Smell$_1$ takes an object when the subject is the experiencer (the object itself corresponding to the stimulus) and smell$_2$ an object with the preposition *of* when

the subject is the source of the stimulus (the of-object corresponding to the stimulus).

Further differences can be observed between English and Spanish; for example, in the case of verbs of taste, they are bidirectional in English, but not in Spanish. As a consequence, the English verb *taste* translates differently depending on whether the subject is doing the tasting or being tasted. This difference is illustrated in examples (16) and (17):

(16)   Ella mismo lo había **probado** (Esquivel 1989:116)
         She had **tasted** it herself (Esquivel 1992:131)   [RECEPTION]

(17)   Chocolate **tastes** even better than cacao beans (Dahl 1975: 95)
         El chocolate tiene aún mejor sabor que los granos de cacao (Dahl 1978: 88)   [EMISSION]

In example (16) we find the Spanish verb *probar*, which can only function with an experiencer subject, that is, its subject is the entity receiving and processing the sensory information. However, its English counterpart, *taste*, is a bidirectional verb, and can function in both reception and emission modes. When *taste* is being used in the emission mode, it has to be translated into Spanish in a different way. This is what we find in (17), where taste has been rendered into Spanish as "tener sabor" (another option would have been "saber").

3.2.2.4 *Explicitation of the perceptual event.* English allows the use of some deictic pronouns (*this* and *that*) which preceded by the preposition at, refer to the perceptual scene as a whole. As these deictic elements are not linked to any perception mode, the information about the perceptual modality is omitted (or left implicit). This use of deictic pronouns is not possible in Spanish, where the corresponding verb of perception must be included explicitly. Generally speaking, Spanish seems to show a tendency for making the perceptual information explicit (at least to a higher degree than English). Thus, we find examples such as (18) and (19):

(18)   At **this** (Kureishi 1990: 100)
         al **oír** esto (Kureishi 1992: 131)

(19)   Al **escuchar** estas palabras (Esquivel 1989: 18)
         at that (Esquivel 1992: 13)

This different use of deictic pronouns referred to a perceptual scene is reflected in the strategies used by the translators. They tend to include the relevant

perception verb when translating into Spanish (*oir*, in example 18) and omit it when translating into English (*escuchar*, example 19).

3.2.2.5 *Volitional/non-volitional.* Another difference between English and Spanish perception verbs can be established with regard to the volitionality of the subject. In this sense, some perception verbs involve a volitional perceptor (i.e. an AGENT) and some involve a non-volitional one (i.e. an EXPERIENCER). This difference is clearly observed in the case of verbs of seeing; in both English and Spanish, volitional and non-volitional options are linked to different lexical verbs:

(20) see vs. look
      Non-volitional: I saw an accident   (subject is Experiencer)
      Volitional: I looked at the boy   (subject is Agent)

(21) ver vs. mirar
      Non-volitional: Ví un accidente por la carretera (subject is Experiencer)
      Volitional: Mira en la cartera por si está ahí   (subject is Agent)

However, in the case of verbs of hearing, the situation is different: in English, the difference between volitional and non-volitional verbs is reflected in the distinction between *listen* and *hear,* respectively. In Spanish, the distinction between the verbs *oír* and *escuchar* does not hinge as clearly on the volitionality on the subject: according to the examples found in our corpus, it seems that the verb *escuchar* can be used both volitionally (ex. 22) and non-volitionally (ex. 23):

(22) VOLITIONAL
      El doctor llegó y **escuchó** la versión de la historia de parte de mama Elena (Esquivel 1989: 91)
      The doctor arrived and **listened** to Mama Elena's version of the story (Esquivel 1992: 100)

(23) NON-VOLITIONAL
      Su llanto era tan fuerte que Nacha, la cocinera de la casa, que era medio sorda, lo **escuchaba** sin esforzarse. (Esquivel 1989: 11)
      Her sobs were so loud that even Nacha, the cook, who was half deaf, could **hear** them easily (Esquivel 1992: 4)

Once more, this difference could be detected in the translators strategies. When going from English into Spanish, *hear* was translated as *oír* in an overwhelm-

ing number of cases (39 out of 41); likewise, the equivalent of *listen* was mainly *escuchar* (15 out of 16 cases). However, when translating in the opposite direction, the situation is strikingly different. In our corpus, *escuchar* was frequently interpreted as non-volitional and thus it was considered as a equivalent of *hear* in a higher number of cases than *listen*: out of the 36 times the verb *escuchar* was used, it was translated as *hear* in 28 cases (77.8%), and only 5 times was it translated as *listen* (13.9%) (cf. example 23).

3.2.2.6 *Metaphorical projections.* One of the most recurrent conceptual mechanisms structuring language is metaphorical projection. In metaphor, the structure of a given domain (called the "source" domain) is mapped onto a different one (the "target" domain), which as a result is structured and understood in terms of the first one. Thus, in the widely-quoted metaphor "LOVE IS A JOURNEY" (cf. Lakoff and Johnson 1980), knowledge about the source domain (JOURNEY) is used to structure the target domain, LOVE, motivating many expressions such as "this relationship has hit a dead-end-street", "from now on, we'll go separate ways", "their marriage in on the rocks", "we're spinning our wheels", etc.

Normally, source domains are more concrete than target domains. The realm of perception is a rather concrete domain and participates as source domain in several metaphors.[5] One of the most pervasive ones concerns the connection between "seeing" and "understanding" (i.e. UNDERSTANDING IS SEEING, cf. Lakoff 1987, Sweetser 1990). In this metaphor, the source domain is the seeing event, which is mapped onto the understanding event; examples of this metaphor can be found both in English and Spanish (cf example 24).

(24) a. *I see what you mean/It's very clear to me*
      b. Ya veo lo que quieres decir/Está muy claro

In our corpus, we have found another metaphor related to verbs of perception which could be labelled as KNOWING IS HEARING. In this metaphor, the hearing event is mapped onto the target domain, knowing: to hear something is to become aware of it; cf examples (25) and (26).

(25) con el retorno de Tita al rancho al **conocer** la desgracia… (Esquivel 1989: 114)
      when Tita returned to the ranch after **hearing about** their calamity… (Esquivel 1992: 129)

(26) when I **heard about** these tickets things (Dahl 1975: 47)
      cuando me **enteré** de este asunto (Dahl 1978: 45)

Examples of this metaphor seem to be more natural in English; thus we find that in example 25, Spanish *conocer* is translated by the metaphor *hear about*, whereas in example 26, *hear about* has been translated by the non-metaphoric *enterarse*. Even though no examples have appeared in our corpus, the possibility of finding Spanish linguistic expressions of this metaphor exists (cf. *he oido que te casas este verano*). Our results seem to agree with the findings reported in Ibarretxe (1999).

4.   Conclusion

This paper started with a double goal; on the one hand, we intended to examine the possible loss/gain of information in the translation of verbs of perception between English and Spanish. This goal was triggered by findings such as Slobin's, who reported informational differences in the translation of verbs of motion (Slobin 1996, 1997). In that case, typological differences between English and Spanish were the key determinant behind the inclusion or omission of particular pieces of information when translating from one language to the other. Changes in information were related to the expression of "manner" and "path", which is dealt differently by the two languages: Spanish verbs tend to conflate path information, while English verbs tend to conflate manner.

Since there are other domains in which manner can be conveyed by means of verbal conflation, we investigated whether typologically-grounded differences in the conflations patterns of English and Spanish would also affect the domain of verbs of perception. The quantitative analysis of the perception verbs found in a database of examples from two Spanish and two English novels and their translations, revealed no significant informational gain or loss in the target texts (48 verb types in Spanish source texts translated as 49 verb types in the English target texts, and 46 verb types in English source texts translated as 39 verb types in the Spanish target texts). We did find some examples in which there were some differences in the informational load, but their sparse number could not be taken as indicative of any particular tendency, at least in this preliminary study (cf. examples 1–4).

A second related goal was to examine whether translation shifts provided evidence for a difference in the way the perception event is structured in the two languages. In order to achieve this aim, we carried out a qualitative analysis of the examples using Frame Semantics as a methodological tool. To study the differences in the way the perception event is structured in both languages we used a modified version of the PERCEPTION-frame found in Fillmore (2000);

after comparing English and Spanish examples against this background, we did find some relevant dissimilarities.

Firstly, we detected some differences related to the explicitness of the information. Thus, the analysis of the examples in our corpus revealed that in English, the perceptor can be omitted from the scene, while Spanish tends to express it either explicitly (e.g. as subject) or implicitly (e.g. using the Spanish reflexive-passive construction). Second, we discovered some changes in perspective; for example, in the translation of verbs of hearing, sometimes the perspective was reversed: from emission of sound in English to reception of sound in Spanish. Another dissimilarity concerned the "bidirectionality" of some perception verbs. For instance, some English verbs like *smell* and *taste* are bidirectional, that is, they may denote both reception of a stimulus and its production; however, in Spanish, only the equivalent of *smell*, i.e. *oler,* shows this behaviour whereas *taste* requires two different translations (depending on whether the subject is the TASTER or the TASTED). We also found an asymmetry between English and Spanish verbs of hearing: English *hear* and *listen* reflect the distinction "non-volitional/volitional" more clearly than their Spanish counterparts *oír* and *escuchar*. Finally, there are certain metaphors which are pervasive in the domain of perception; one of the most widely attested is the metaphor UNDERSTANDING IS SEEING. In our examples, we also found instances of another metaphor, which can be formulated as KNOWING IS HEARING. Examples of this metaphor seemed to be more frequent in our English examples than in their Spanish counterparts.

As a conclusion, we can say that assuming the existence of an organized structure behind the verbs of perception, i.e. the PERCEPTION-frame, and the fact that perception events are structured differently in Spanish and English, allows us to supply a coherent explanation for certain differences in English ↔ Spanish translations which would be otherwise considered unprincipled or random decisions taken by the translator.

Notes

1. Verbs of seeing have been excluded since they were studied in Rojo and Valenzuela (1999).

2. This is roughly based on the perception frame provided by Fillmore in his FrameNet Project (Fillmore, 2000) which was modified and adapted for the purposes of our analysis. For further details, check http://www.icsi.berkeley.edu/framenet.

3. This construction does exist in Spanish (e.g. *había mucho ruido en la habitación* –lit. there was a lot of noise in the room); however, it seems to be more restricted than its English counterpart and the version with the passive-*se* is often more natural, as in the case of the examples we analyse here.

4. The bidirectionality and volitional-non-volitional distinctions have been extensively discussed in the literature on perception verbs; different authors have used different names for these distinctions: active-passive, experiencer, copulative, etc. Some classic references are Kryk (1979), Leech (1971), Lehrer (1990), Palmer (1966), Poutsma (1926), Rogers (1971a, 1971b, 1972, 1973) or Viberg (1984).

5. For an extended discussion of conceptual differences in the different mappings from the domains of visual, hearing and smelling perception in English, Spanish and Basque, see Ibarretxe (1999).

References

Fillmore, C. 1971. "Verbs of Judging: An Exercise in Semantic Description". In *Studies in Linguistics Semantics*, C.J. Fillmore and T. Langendoen (eds), 272–289. New York: Holt, Rinehart and Winston.

Fillmore, C. 2000. The FrameNet Project. Online: www.icsi.berkeley.edu/framenet [accessed Oct. 2000].

Fillmore, C. and Atkins, B.T.S. 1992. "Towards a Frame-based Fexicon: The Semantics of RISK and its Neighbours". In *Frames, Fields and Contrasts: New Essays in Semantics and Lexical Organization*, E. Kittay and A. Lehrer (eds), 75–102. Hillsdale (NJ): Lawrence Erlbaum Associates.

Fillmore, C. and Atkins, B.T.S. 1994. "Starting where Dictionaries Stop: The Challenge of Corpus Lexicography". In *Computational Approaches to the Lexicon,* B. Atkins and E. Zampolli (eds), 350–393. Oxford: Oxford University Press.

Ibarretxe-Antuñano, I. 1999. "Polysemy and Metaphor in Perception Verbs: A Cross-linguistic Study". Ph.D. dissertation, University of Edinburgh.

Kryk, B. 1979. "Some Remarks on the Verbs of Perception in English and Polish". In *Papers and Studies in Contrastive Linguistics,* J. Fisiak (ed), 113–231. Poznann and Arlington: Center for Applied Linguistics.

Lakoff, G. and Johnson, M. 1980. *Metaphors We Live By*. Chicago: University of Chicago Press.

Lakoff, G. 1987. *Women, Fire and Dangerous Things: What Categories Reveal about the Human Mind*. Chicago: University of Chicago Press.

Leech, G. 1971. *Meaning and the English Verb*. London: Longman.

Lehrer, A. 1990. "Polysemy, Conventionality, and the Structure of the Lexicon". *Cognitive Linguistics* 1(2): 207–246.

Palmer, F. R. 1966. *A Linguistic Study of the English Verb*. London: Longman.

Poutsma, H. 1926. *A Grammar of Late Modern English. Part II: The Parts of Speech. Section II*. Groningen: P. Nordhoff.

Rogers, A. 1971. "Three Kinds of Physical Perception Verbs". *Chicago Linguistics Society* 7: 206–223.

Rogers, A. 1972. "Another Look at Flip Perception Verbs". *Chicago Linguistics Society* 8: 303–316.

Rogers, A. 1973. "Physical Perception Verbs in English: A Study in Lexical Relatedness". Ph.D. dissertation, University of California, Los Angeles.

Rojo, A. and Valenzuela, J. 1998. "Frame Semantics and Lexical Translation: The Risk Frame and its Translation". *Babel* 44(2): 128–138.

Rojo, A. and Valenzuela, J. 1999. "Una Comparación de los Verbos de Ver en Inglés y Español Utilizando Frame Semantics". In *Lenguas en Contacto*, G. Alvarez Benito et al (eds) (CD-ROM edition). Sevilla: Universidad de Sevilla.

Rojo, A. and Valenzuela, J. 2000. "Maneras de Decir: Verbos de Decir en Español y su Traducción al Inglés". In *Insights into Translation (Vol II),* A. Soto Vazquez, and B. Crespo García (eds)*,* 115–126. La Coruña: Lugami.

Rojo, A. and Valenzuela, J. 2001. "How to Say Things with Words: Ways of Saying in English and Spanish". *Meta* 46(3): 467–477.

Slobin, D. 1996. "Two Ways to Travel: Verbs of Motion in English and Spanish". In *Grammatical Constructions: Their Form and Meaning,* S. Masayoshi (ed), 195–219. Oxford: Clarendon Press.

Slobin, D. 1997. "Mind, Code and Text". In *Essays on Language Function and Language Type: Dedicated to Talmy Givón,* J. Bybee, J. Haiman and S.A. Thompson (eds), 437–467. Amsterdam/Philadelphia: John Benjamins.

Sweetser, E. 1990. *From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure*. Cambridge (MA): Cambridge University Press.

Talmy, L. 1991. "Path to Realization: A Typology of Event Conflation". *Proceedings of the Seventeenth Annual Meeting of the Berkeley Linguistics Society*, Berkeley: Berkeley Linguistics Society: 480–519.

Valenzuela, J. 1996. "Esquemas Cognitivos y Construcciones Gramaticales en el Verbo Inglés". Ph.D. dissertation, University of Murcia.

Viberg, A. 1984. "The Verbs of Perception: A Typological Study" In *Explorations for Language Universals*, B. Butterworth, B. Comrie and O. Dahl (eds), 123–162. Berlin: Mouton de Gruyter.

Novels

Spanish:

Esquivel, L. 1989. *Como Agua para Chocolate*. Barcelona: Editorial Mondadori. [*Like Water for Chocolate,* trans. Carol and Thomas Christensen, New York: Uncle Books, 1992].

Vargas Llosa, M. 1998. *Los Cuadernos de Don Rigoberto*. Barcelona: Editorial Alfaguara. [*The Notebooks of Don Rigoberto*, trans. Edith Grossman, London: Faber and Faber, 1999].

English:

Dahl, R. 1975. *Charlie and the Cchocolate Factory*, London: Puffin Books, [*Charlie y la Fábrica de Chocolate*, trans. Verónica Head, Barcelona: Alfaguara, 1978].

Kureishi, H. 1990. *The Buddha of Suburbia*. London/Boston, Faber and Faber 1990. [*El Buda de los Suburbios*, trans. Mónica Martín Berdagué, Barcelona: Editorial Anagrama, 1992].

Authors' address

Departamento de Filología Inglesa
Universidad de Murcia
Plaza de la Universidad 1
30071 Murcia (Spain)

anarojo@um.es, jvalen@um.es

Appendix I

Buddha of Suburbia			
Hearing		**Smelling**	
ST	**TT**	**ST**	**TT**
hear (24)	oir (23), escuchar (1)	stink (3)	apestar (2), oler (1)
listen (9)	escuchar (9)	dip one's nose (1)	hundir la nariz (1)
start to get (1)	oir (1)	sniff (1)	olisquear (1)
there was music (2)	se oía (2)	inhale (1)	inhalar (1)
there was a flurry (1)	oir (1)	hurry for my nostrils (1)	meterse por la nariz (1)
sound (1)	antojarse (1)	smell (6)	llevar pegado el olor (1), oler (3), con su olor a (1), notar un olor (1)
bath one's ear (1)	desatascar los oidos (1)		
coming from (1)	oir (1)		
have ears open (1)	tener los oidos abiertos (1)		
say (1)	oir (1)		
play a record (1)	escuchar (1)		
Ø (7)	oir (6), escuchar (1)		
know (1)	oir (1)		
speak (1)	oir hablar (1)		
Total: 52 tokens (ST:13 types; TT: 5 types)		Total:13 tokens (ST: 6 types; TT:8 types)	

Touching		Tasting	
ST	TT	ST	TT
tighten (1)	noté un calambre en el estómago (1)	savour (1)	saborear (1)
touch (2)	tocar (2)		
lay my hand (1)	colocar la mano (1)		
toss (1)	toquetear (1)		
have one's hand (1)	acariciar (1)		
feel (1)	notar (1)		
Ø (1)	notar (1)		
get a handful (1)	agarrar un pedazo (1)		
Total: 9 tokens (ST: 8 types; TT: 6 types)		Total: 1 token (ST: 1 type; TT: 1 type)	

Charlie and the chocolate factory			
Hearing		**Smelling**	
ST	TT	ST	TT
Ø (1)	oír (1)	take sniffs of (2)	aspirar bocanadas (2)
listen (7)	escuchar (6) oír (1)	smell (1)	oler (1)
hear (17)	oír (16), enterarse (1)	sniff (1)	olfatear (1)
to come a sound (2)	oír (2)	eat the smell (1)	comerse el olor (1)
there came a sound (1)	oír (1)		
Total: 28 tokens (ST: 5 types; TT: 3 types)		Total: 5 tokens (ST: 4 types; TT: 4 types)	
Touching		**Tasting**	
ST	TT	ST	TT
touch (5)	tocar (5)	munch (2)	masticar (2)
run his fingers (1)	pasar las puntas de los dedos (1)	taste (8)	probar (2) saber a (1) tener un sabor (2) darle un sabor (1) saborear (2)
stroke (1)	acariciar (1)	suck (6)	chupar (5) probar (1)
hold (2)	coger (1) agarrar (1)	run the point of the tongue over (1)	relamerse (1)
to be untouched (1)	no ser tocado (1)	nibble (1)	mordisquear (1)
		lick (2)	lamer (2)
		chew (9)	masticar (7) mascar (2)
		gobble up (1)	comérselos (1)

		lap (1)	lamer (1)
		have a taste (1)	probar (1)
Total: 10 tokens (ST: 5 types; TT: 6 types)		Total: 32 tokens (ST: 10 types; TT: 12 types)	

Agua para el chocolate			
Hearing		*Smelling*	
ST	TT	ST	TT
escuchar (33)	hear (27) Ø (2) overhear (1) listen (3)	oler (6)	smell (5) sniff (1)
escuchar los pillidos (1)	the peeping got louder (1)	percibir un olor (1)	notice a smell (1)
oír (7)	hear (7)	sentir el olor (1)	with a whiff of (1)
conocer (1)	hear about (1)		
Total: 42 tokens (ST: 3 types; TT: 6 types)		Total: 8 tokens (ST: 3 types; TT: 4 types)	
Touching		*Tasting*	
ST	TT	ST	TT
frotarse (1)	rub (1)	probar (3)	taste (3)
tocarle el cuerpo (1)	make it to the body (1)	sentir un sabor (1)	notice a taste (1)
tocar (2)	touch (2)	detectar un sabor (1)	detect a taste (1)
poner la mano (1)	place one's hand (1)	percibir un veneno disuelto (1)	the poison that was dissolved (1)
amasar (1)	caress (1)		
deslizarse (1)	slid (1)		
palpar (1)	touch (1)		
tomar de la mano (1)	take one's hand (1)		
estar unidos (1)	touch (1)		
estar intacto (1)	to be untouched (1)		
sentir (3)	feel (2) sense (1)		
apretar (1)	press (1)		
percibir (1)	feel (1)		
con el contacto del agua (1)	when the water touched them (1)		
moldear (1)	shape (1)		
acariciar (1)	stroke (1)		
Total: 19 tokens (ST: 15 types; TT: 13 types)		Total: 6 tokens (ST: 4 types; TT: 4 types)	

Cuadernos de Don Rigoberto			
Hearing		**Smelling**	
ST	TT	ST	TT
oír (13)	hear (13)	aspirar un olor (1) aspirar la fragancia (1)	breathe the odor (1) breathe the fragance (1)
escuchar (3)	listen (2) hear (1)	olfatear (4)	sniff (3) smell (1)
percibir el chas-chas (1)	detect the whisper (1)	oler a (1)	to wear a scent (1)
registrar el oido (1)	register (1)	olisquear (1)	sniff (1)
agudizar el oido (1)	sharpen the ear (1)		
Total: 19 tokens (ST: 5 types; TT: 5 types)		Total: 8 tokens (ST: 4 types; TT: 4 types)	
Touching		**Tasting**	
ST	TT	ST	TT
coger (7)	hold (2) rub (1) grasp (2) pick (1) catch (1)	lamer (4)	lick (3) lap (1)
deslizar (1)	slide (1)	empalagar (1)	cloy (1)
sentir (6)	feel (6)	mordisquear (1)	nibble (1)
acariciar (8)	caress (n) (1) caress (v) (5) stroke (1) cherish (1)	degustar (1)	eat (1)
untar (1)	smear (1)		
tocar (3)	touch (3)		
rascar (1)	scratch (1)		
estrujar (1)	cruship (1)		
recorrer (1)	trace (1)		
frotar (4)	brush (1) rub (3)		
abrazar (3)	embrace (3)		
apretar (1)	squeeze (1)		
ceñir (1)	put it around (1)		
apresar (1)	grasp (1)		
sobar (2)	rub (2)		
Total: 41 tokens (ST: 15 types; TT: 19 types)		Total: 7 tokens (ST: 4 types; TT: 5 types)	

English novels			
Hearing		*Smelling*	
ST	TT	ST	TT
hear (41)	oir (39), escuchar (1), enterarse (1)	stink (3)	apestar (2), oler (1)
listen (16)	escuchar (15), oir (1)	dip one's nose (1)	hundir la nariz (1)
start to get (1)	oir (1)	sniff (2)	olisquear (1), olfatear (1)
there was music (2)	se oía (2)	inhale (1)	inhalar (1)
there was a flurry (1)	oir (1)	hurry for my nostrils	meterse por la nariz (1)
sound (1)	antojarse (1)	smell (7)	llevar pegado el olor (1), oler (4), con su olor a (1), notar un olor (1)
bath one's ear (1)	desatascar los oidos (1)	take sniffs of (2)	aspirar bocanadas (2)
coming from (1)	oir (1)	eat the smell (1)	comerse el olor (1)
have ears open (1)	tener los oidos abiertos (1)		
say (1)	oir (1)		
play a record (1)	escuchar (1)		
Ø (8)	oir (7), escuchar (1)		
know (1)	oir (1)		
speak (1)	oir hablar (1)		
to come a sound (2)	oír (2)		
there came a sound (1)	oír (1)		
Total: 80 tokens (ST: 15 types; TT: 6 types)		Total: 18 tokens (ST: 8 types; TT: 12 types)	
Touching		*Tasting*	
ST	TT	ST	TT
tighten (1)	noté un calambre en el estómago (1)	savour (1)	saborear (1)
touch (7)	tocar (7)	munch (2)	masticar (2)
lay my hand (1)	colocar la mano (1)	lap (1)	lamer (1)
toss (1)	toquetear (1)	suck (6)	chupar (5) probar (1)
have one's hand (1)	acariciar (1)	run the point of the tongue over (1)	relamerse (1)
feel (1)	notar (1)	nibble (1)	mordisquear (1)

Ø (1)	notar (1)	lick (2)	lamer (2)
get a handful (1)	agarrar un pedazo (1)	chew (9)	masticar (7)
			mascar (2)
run his fingers (1)	pasar las puntas de los dedos (1)	gobble up (1)	comérselos (1)
stroke (1)	acariciar (1)	taste (8)	probar (2)
			saber a (1)
			tener un sabor (2)
			darle un sabor (1)
			saborear (2)
hold (2)	coger (1)	have a taste (1)	probar (1)
	agarrar (1)		
to be untouched (1)	no ser tocado (1)		
Total: 19 tokens (ST: 12 types; TT: 9 types)		Total: 33 tokens (ST: 11 types; TT: 12 types)	

Spanish novels			
Hearing		**Smelling**	
ST	TT	ST	TT
Escuchar (36)	Hear (28)	Oler (6)	Smell (5)
	Ø (2)		Sniff (1)
	Overhear (1)		
	Listen (5)		
Escuchar los pillidos (1)	The peeping got louder (1)	Percibir un olor (1)	Notice a smell (1)
Oír (20)	Hear (20)	Sentir el olor (1)	With a whiff of (1)
Conocer (1)	Hear about (1)	Olisquear (1)	Sniff (1)
Percibir el chas-chas (1)	Detect the whisper (1)	Aspirar un olor (1)	Breathe the odor (1)
		Aspirar la fragancia (1)	Breathe the fragance (1)
Registrar el oido (1)	Register (1)	Olfatear (4)	Sniff (3)
			Smell (1)
Agudizar el oido (1)	Sharpen the ear (1)	Oler a (1)	To wear a scent (1)
Total: 61 tokens (ST: 6 types; TT: 8 types)		Total: 16 tokens (ST: 7 types; TT: 6 types)	
Touching		**Tasting**	
ST	TT	ST	TT
Frotarse (1)	Rub (1)	Probar (3)	Taste (3)
Tocarle el cuerpo (1)	Make it to the body (1)	Sentir un sabor (1)	Notice a taste (1)
Tocar (5)	Touch (5)	Detectar un sabor (1)	Detect a taste (1)

Poner la mano (1)	Place one's hand (1)	Percibir un veneno disuelto (1)	The poison that was disolved (1)
Amasar (1)	Caress (1)	Lamer (4)	Lick (3)
			Lap (1)
Deslizarse (1)	Slid (1)	Empalagar (1)	Cloy (1)
Palpar (1)	Touch (1)	Mordisquear (1)	Nibble (1)
Tomar de la mano (1)	Take one's hand (1)	Degustar (1)	Eat (1)
Estar unidos (1)	Touch (1)		
Estar intacto (1)	To be untouched (1)		
Sentir (9)	Feel (8)		
	Sense (1)		
Apretar (2)	Press (1), squeeze (1)		
Percibir (1)	Feel (1)		
Con el contacto del agua (1)	When the water touched them (1)		
Moldear (1)	Shape (1)		
Coger (7)	Hold (2)		
	Rub (1)		
	Grasp (2)		
	Pick (1)		
	Catch (1)		
Deslizar (1)	Slide (1)		
Acariciar (9)	Caress (n) (1)		
	Caress (v) (5)		
	Stroke (2)		
	Cherish (1)		
Untar (1)	Smear (1)		
Rascar (1)	Scratch (1)		
Estrujar (1)	Cruship (1)		
Recorrer (1)	Trace (1)		
Frotar (4)	Brush (1)		
	Rub (3)		
Abrazar (3)	Embrace (3)		
Ceñir (1)	Put it around (1)		
Apresar (1)	Grasp (1)		
Sobar (2)	Rub (2)		
Total: 60 tokens (ST: 27 types; TT: 26 types)		Total: 13 tokens (ST: 8 types; TT: 9 types)	