



Polysemic Senses of Weight in Chilean Spanish

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PAOLA ALARCÓN

Universidad de Concepción

palarco@udec.cl

This paper presents an analysis of the polysemic senses of lexical items related to the conceptual domain of WEIGHT. This study is set within the framework of cognitive lexical semantics, where lexical items are assumed to constitute natural categories of related senses, which are organized in polysemic networks by cognitive principles such as metaphor, which motivate relations among the different senses (Taylor, Cuyckens and Dirven 2003). In this work, we assume that the inferential principles, properties and elements of the concrete experience domain (source domain), are projected upon other more abstract domains (target domains). Such projection makes metaphorical senses possible (Lakoff and Johnson 1980). Thus, in Spanish, apart from the senses in the physical dimension, the lexical items within the domain of WEIGHT have senses in other domains, for example, IMPORTANCE, UNPLEASANTNESS and RESPONSIBILITIES. Polysemic lexical items are analysed taking into account their systematic relations with other elements which co-occur in certain syntactic patterns.

Following an approach based on use, we used the reference Corpus of current Spanish for Chile as presented by the Real Academia Española (CREA). The analysis undergoes the following stages: 1) description of the experiential motivation, e.g, image schemas that idealize experiences related to WEIGHT; 2) creation of an exhaustive list of corresponding lexical items; 3) search for data in the corpus of CREA; 4) organisation of polysemic senses in syntactic patterns; 5) description of conceptual metaphors.

This study shows that experiential motivation allows explaining the relationship between groups of senses. In this paper we refer to two of them: CARRYING AN OBJECT and HAVING WEIGHT. The schema has participants that are realised with certain syntactic functions within a construction. This enables to explain, on the one hand, the systematic relationships between senses corresponding to different lexical items. On the other hand, it allows explaining the polysemy of each item.

Keywords: weight, polysemy, conceptual metaphor, syntactic patterns, Chilean Spanish.

1. Introduction

This paper presents an analysis of the polysemic senses of lexical items related to the conceptual domain of weight, within the framework of Cognitive Linguistics. In English, metaphoric concepts that have weight as the source domain have been identified by authors such as Kövecses (2005),

Stefanowitsch (2006) and Grady (2005), among others. Though we have identified some of these concepts, the objective of this research is to explain the systematic relationships between the senses of this domain in Chilean Spanish.

We consider that polysemy is an inherent feature of cognition and language; therefore, its study supposes to have the procedures to identify and define the meanings of the linguistic units and to establish the principles through which the polysemic senses are systematically related, from the point of view of the nature of meaning and language.

Regarding these requirements, this research is framed within what Taylor, Cuyckens and Dirven (2003) call *cognitive lexical semantics*. Within this framework, it has been assumed that lexical items are natural categories of senses that are related and organised around a primary sense creating polysemic networks, and mainly research into the cognitive principles explaining the relationships between the different polysemic senses, such as metaphor, image schemas transformation, and force dynamics, have been carried out. In the analysis of lexical polysemy from this perspective, the radial category (Lakoff 1987; Brugman and Lakoff 1988) and the Schematic network model (Langacker 1987; Tuggy 2007, 2003) are highlighted. As well as considering the contribution of these models, we are particularly interested in addressing aspects that we consider significant and relevant to systematise polysemic senses and to account for the language in use.

- a) The value of syntactic context. We are interested in determining the syntactic patterns by which polysemic senses are realised. Complementarily, we intend to identify the lexical items with which the lexical items frequently co-occur, depending on their particular polysemic sense. Bearing this in mind, our objective is not to identify a central entity, whether a prototype or a schema, but semantic relations within the same syntactic construction.
- b) The corpus. According to an approach based on use, we use the *Corpus de Referencia del Español Actual of the Real Academia Española (CREA)* for Chilean Spanish.

2. Analysis Procedure

The starting point for the analysis is the identification of regular syntactic patterns where the lexical items occur. These patterns enable us to account for the semantic and syntactic relationships between the polysemic senses. The model is based on the assumption that the meaning of the lexical items cannot be isolated from the syntactic patterns where they occur, according to the principle of *continuum* between lexicon and syntax.

The questions that guide this research are:

1. What are the senses?
2. What relationship is there between these senses?
3. What is the motivation for these senses?

4. Why are there positive and negative evaluations in polysemic senses?

The analysis comprises the following stages: 1) description of the experiential motivation, e.g, image schemas that idealise experiences relative to weight; 2) development of a comprehensive list with the corresponding lexical items; 3) search for data in *corpus* CREA; 4) organisation of the polysemic senses in constructions; 5) description of conceptual metaphors.

3. Results of the Analysis

We organised the senses according to their experiential basis. On one hand, the senses motivated by the schema of CARRYING; on the other, the senses motivated by the idealised property of having weight, specifically, that the greater the size and weight an object has, the more salient the object is, perceptually speaking.

In each group of senses there are syntactic forms shared by the senses of the physical domain and by the metaphoric senses. Firstly, the senses of the physical domain are presented. For the metaphoric senses, the conceptual correspondences that constitute the metaphor, i.e., the relationship between the properties and elements of the source domain and the target domain, are also presented.

3.1 Carrying Weight

3.1.1 Motivation

The schema of carrying an object idealises actions, relations, and properties of abstract participants.

Schema of carrying an object

- t₁ [Agent carries a heavy object]
- t₂ [Agent leaves the heavy object in place]

The logic of the schema is:

- The carrier can carry the heavy object along a path.
- When the carrier carries the heavy object, the latter is under his/her control.
- The carrier can damage the heavy object.
- The greater the weight of the heavy object, the greater the effort of the carrier.
- Carrying a heavy object can cause damage to the carrier.
- After leaving the heavy object the carrier feels relief.
- Someone can take the heavy object from the carrier.
- Someone can help hold the heavy object.

3.1.2 Senses and Syntactic Realisations

A. Physical Domain

This schema enables us to account for the senses: Heavy object realised by nouns as *peso* ('weight') and *carga* ('heavy object'); in addition to the senses of verbs such as: *portar* ('carry'), *soportar* ('bear'), *dejar* (un objeto pesado) ('leave a heavy object'), *aliviarse* (de un peso) ('get rid of weight and feel relief').

The following construction includes the participants of the schema of CARRYING AN OBJECT.

Transitive construction CARRYING AN OBJECT

Semantics:	Agent	<i>portar</i>	Theme
	↓	↓	↓
Syntax	Subject	predicate nucleus	Direct Object
	↓	↓	↓
Syntactic categories	NP	Verb	NP (<i>peso, carga</i>)

Example:

- (1) Por sus heridas, el animal no puede transportar peso sobre su lomo.
(Because of its wounds, the animal can not carry weight on its back.)

The senses of Bear, Leave a heavy object, and Get rid of the weight and feel relief select certain aspects of the schema logics. Besides, they could be explained as stages of an idealised scene where the event of carrying an object is even more exhausting for the Carrier: when the heavy object becomes unbearable to carry, he/she has to leave it behind. The consequence of this is that the syntactic position of the Subject is occupied by the semantic role of Agent in Carry, Affected in Bear, and Agent that has a hint of Affected in Leave a heavy object and Get rid of weight and feel relief. For example, the sense of Bear selects the principles:

- The greater the weight of the Heavy Object, the greater the effort of the
- Carrier.
- Carrying a Heavy Object can cause damage to the Carrier.

In the construction, the semantic role of Affected occupies the place of the Subject. Example:

- (2) Sólo que el fondo de la piscina no soportaría este tremendo peso.
(The bottom of the pool could not bear this tremendous weight.)

It has to be noted that in the corpus, the noun that appears most frequently for this sense is not *peso* but *carga*.

B. Metaphoric Senses

The metaphoric senses highlight this logic of the schema:

- The greater the weight of the heavy object, the greater the effort (energy expenditure) of the carrier.
- Carrying a heavy object can cause damage to the carrier.

B1. Situations that Involve Effort

We propose as a general metaphor SITUATIONS THAT DEMAND EFFORT ARE BURDENS with the following conceptual correspondences:

- Objects are situations.
- To bear or carry a heavy object is to experience the situation.
- Bearing or carrying a heavy object is to experience the situation that demands effort.
- A heavy burden is a situation that requires effort and causes discomfort.
- To leave the burden behind is stopping experiencing a certain situation.

This way, a situation or a person is considered *heavy* when the interaction demands an exhausting effort. For example:

- (3) Siempre he vivido como mártir, cargando el peso de una culpa desconocida.
(I have always lived as a martyr, bearing the weight of an unknown guilt.)

B2. Responsibility

Depending on the items with which it co-occurs in the utterances, more specific senses of these general metaphoric senses can be proposed. These senses focalise the principle that the energy expenditure is uncomfortable or negative. Thus, the sense of Having a responsibility, is explained by the metaphor HAVING A RESPONSIBILITY IS TO CARRY A BURDEN. The conceptual correspondences are:

- To carry a burden is to have a responsibility.
- A very heavy object is a great responsibility.
- To leave the burden in a place is to rid of the responsibility.
- The effects of carrying a burden are the effects of having a responsibility.

In the event of carrying, there is an Agent that performs the action and that has the object in its domain. However, instead of highlighting that the Agent is in control of the object, the metaphor highlights that the carrier is affected by the weight of the object. Therefore, in the construction, the semantic role that corresponds to the Subject presents a duality that is accounted for by the schema and by the specific logics that is selected for this sense.

In the expressions we observed, as in the physical domain, the association between the senses of Carry, Bear, and Leave a heavy object. Example:

- (4) Encontré al presidente tranquilo y distendido, como si se hubiera sacado de encima un enorme peso.
(I found the president was quiet and relaxed, as if he had taken a great burden off his back.)

The use of the noun *carga* and the past participle *pesado* with this sense is frequent:

- (5) Ella sostenía en sus hombros la pesada carga de administrar la casa.
(She was holding on her shoulders the heavy burden of managing the house.)
- (6) Esa labor pesada, desagradable.
(That heavy and unpleasant task)'
- (7) Ya no puedo más con los trabajos pesados.
(I can't bear heavy tasks anymore.)

B3. Nasty

Though not with the noun *peso*, but with the participle *pesado*, we found a very frequent sense in Chilean Spanish: Nasty, which emerges from the metaphor: SOCIAL INTERACTION IS A BURDEN. The conceptual correspondences are:

- A heavy object corresponds to a nasty person.
- The effort in carrying a heavy object corresponds to the effort in interacting with someone.

This metaphor highlights that the interaction with someone is unpleasant because of the energy expenditure involved. Thus, a person is heavy when interacting with him/her demands a greater effort. Linguistically, the sense of Nasty is realised as the adjective (participle) *pesado*, as well as others *cargante*, *plomo*:

- (8) Defiendo con calor mis posiciones, si eso es prepotencia, soy prepotente. Si eso es ser pesado, soy antipático.
(I defend my positions with passion, if that's arrogance, I am arrogant. If that's being heavy, I'm nasty.)

In the utterance we can see that the adjective *pesado* is coordinated with others. Given the systematicity of metaphor, the sense of Nice is shown in expressions such as: *ser liviano de sangre*.

The negative evaluation of these senses contrasts with the physical and metaphoric senses that are analysed in the following section.

3.2 Having Weight

3.2.1 Motivation

The property of an object as having weight motivates the senses: Having a certain weight, along with those relative to change of weight: Changing weight (non agentive), Making change weight to which we will not refer to on this occasion.

The logic that is highlighted in the senses is:

- The greater the weight, the greater the perception of the object and greater the salience.
- The greater the weight, the greater the possibility of affecting others.
- Objects can change weight.
- Agent can add to or remove weight from an object.
- A light object has little effect on its environment.
- Agent can add to or remove weight from an object.
- The greater the weight, the greater the content in object.

3.2.2 Senses and Syntactic Realisations

A. Physical Domain

The sense Having a certain weight is realised in the syntactic forms a) the item *peso* is the nucleus of a Noun Phrase and it has a Prepositional Phrase as complement:

- (9) Verificó el peso del cofre: estaba más liviano.
(He checked the weight of the chest: it was lighter.)

and b) the noun *peso* is part of the noun complement realised by a Prepositional Phrase:

- (10) El escritorio tiene 20 kilos de peso.
(The desk weighs 20 kilos.)

B. Metaphoric Senses

We will refer to the senses Having significance or Being influential, that highlight the principles:

- The greater the weight, the greater the perception of the object, greater salience.
- The greater the weight, the greater the possibility of affecting others.

We propose the metaphor HEAVY OBJECT IS IMPORTANT ENTITY, which has the following conceptual correspondences:

- Objects are affairs or people.
- A heavy object corresponds to an affair or person of importance.
- The weight of an object corresponds to the degree of importance of the affair or person.
- Removing weight from of an object corresponds to reducing the importance of the affair or person.
- Adding weight to an object corresponds to increasing the importance of the affair or person.
- A greater weight in the object corresponds to a greater importance of the affair or person.

B1. Important

The metaphoric sense Important is realised as a complement of a noun, through a Prepositional Phrase:

- (11) Entrevisté a algunas personalidades de mucho peso.
(I interviewed people of heavy weight.)

B2. Importance

For the noun *peso*, the metaphoric sense Importance is realised by a) NP: noun (*peso*) + Prepositional Phrase. Example:

- (12) El peso de la historia es muy fuerte.
(The weight of history is very powerful.)

and b) NP: noun (*peso*) + adjective

- (13) Los partidos políticos han logrado restablecer su peso histórico.
(Political parties have managed to reestablished their historic weight.)

B3. Being Influential

The sense of Being Influential is realised by utterances where there is a complement that allows to place the entity in a group. Examples:

- (14) Ese diputado tiene muchísimo peso al interior de su partido.
(That member of Parliament has a lot of weight within his party.)
- (15) En Brasil, el peso de las comunidades eclesiales de base es muy importante.
(In Brazil, the weight of the ecclesiastical communities is very important.)

4. Comments

In the model we propose, the description had as a starting stage the collection of the greatest quantity and variety of possible data, hence the fact that we

worked with *CREA*, in the line of studies on metaphor based on corpus linguistics developed by researchers such as Charteris-Black (2004), Deignan (2005, 2008), and Stefanowitsch (2006). Our work adopts this approach, because if we intend to account for the expressions in use, we must obtain a wider and more varied corpus so as to account for the different conceptualisations that polysemy shows.

In this stage we observed regularities both in syntactic form as well as in the meaning in groups of utterances. The search for polysemic senses in the corpus led us to pose that the study of lexical polysemy requires an analysis of the syntactic patterns where these senses are realised.

The incorporation of image schemas into the analysis allows accounting for the experiential motivation of meanings. The image schema is the link between the physical, corporal world and its conceptualisation by the individuals. Instead of claiming that the schema is projected to other domains to give origin to the metaphoric senses, we prefer to assume that the schema motivates both the spatial senses as well as the metaphoric ones. The experiential motivation allows explaining the relationship between groups of senses. In this presentation we refer to two of them: *CARRYING AN OBJECT* and *HAVING WEIGHT*.

The schema has participants that are realised with certain syntactic functions within a construction. This enables to explain, on the one hand, the systematic relationships between senses corresponding to different lexical items. On the other hand, it allows to explain the polysemy of each item.

Though the spatial and metaphoric senses share the same basis in the experience and, many times, the same syntactic form, it must be noted that we are not dealing with the same sense or that their differences must be noted.

- Specific syntactic forms for the spatial and metaphoric senses. This is the case, for example, with the sense of Weight in the physical scope, where the item *peso* appears as a prepositional adjunct of a unit of measure (ex. 10). Likewise, the metaphoric sense of Importance has its own constructions that are not within the physical domain, such as *Hacerle peso a algo/alguien* ('to compete against somebody'), *Ser de peso pesado* ('to be of heavy weight'), and others.
- The semantic roles change. The schema *CARRYING AN OBJECT* motivates the physical sense of Burden and the metaphoric senses of Responsibility. However, in the physical domain we found the semantic role of Agent realised by the syntactic subject and in the metaphoric domain we found that the place of the syntactic subject is occupied by the semantic role of Experiencer.

Far from being controversial, these results ratify the polysemic character of the phenomena, since we try to semantically link the different senses, without assuming they are just one.

We observed that some polysemic senses are not neutral with regard to their

power of evaluation over the event in whose configuration they participate. Thus, the property of Having weight, in the senses studied, highlights the salience that an object has when it has a weight greater than that of other objects. This grants a positive value to the senses, in a way similar to what happens with the metaphor SOMETHING IMPORTANT IS BIG. Clearly, size and weight are two associated physical properties. On the contrary, the senses motivated by the schema of Carrying highlight the effort and the energy that the action demands. As a result, the senses motivated by this schema show a negative evaluation. This different evaluation is explained, then, by the different experiential basis of the senses. As can be observed, each sense has a particular configuration. The concept of Responsibility could be considered, for example, as a gift. Nonetheless, according to the metaphoric sense of responsibility analysed, the responsibility is configured as a burden that the individuals want to get rid of.

One consequence of the difference in evaluation is that a same syntactic form has metaphoric senses with different evaluations. For example, the utterance *El es una persona pesada* ('He is a heavy person') has three different senses and evaluations:

- a) Important
- b) Energy demanding (one that requires a lot of attention, for example)
- c) Nasty

Out of the context of use, (a) would have a positive evaluation; (c) negative; but (b) neither negative nor positive. This is an aspect that emerged from the analysis and that clearly requires further study so as to not be based merely on intuition.

Once the analysis that identifies the other senses of Weight is complete, we have to identify the frequency of these items. In the meantime, we can see that in the case of the senses motivated by the schema of CARRYING the metaphoric senses are more frequent than those of the physical domain. This must be established once we have identified the senses and their constructions. Likewise, we must identify the items with which an item syntactically co-occurs depending on its sense. For example: with the senses Situation that involves effort and Responsibility, motivated by the schema CARRYING AN OBJECT, the noun *peso* co-occurs with the verbs *cargar* ('bear', 'carry') and *soportar* ('bear', 'withstand'), among others. Also, synonyms that accompany and reinforce a certain sense can be identified, as it is the case of the sense Nasty in the participle *pesado* that appears in the corpus with other adjectives such as *desagradable* ('unpleasant').

On the other hand, the results of the research could contribute to the discussion about the relationship between language and cognition from a social psychological point of view, in line with research aimed at answering whether language influences, shapes or even determines the human cognitive activities, and whether the cognitive processes affect language (Semin 2009). From the perspective of embodied cognition (Barsalou 2008; Semin and Smith 2008), and closely related to our proposal, Jostmann, Lakens and Schubert (2009) conducted four studies where the participants provided

judgement about Importance in different scopes while they held heavy or light boards. The authors conclude that the abstract concept of importance is founded on the bodily experience of weight, since just as a great weight makes the individuals to apply greater physical effort when dealing with physical objects, it also makes people invest greater cognitive effort when dealing with abstract topics. Similarly, the metaphor DIFFICULTY-AS-HEAVINESS has been studied through psycholinguistic experimentation in order to test its psychological reality and its universal character (Pelosi 2007) within the framework of the hypothesis on primary metaphors (Grady 1997).

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