What is cognitive linguistics? A new framework for the study of Basque[1]

Introduction: More than one Cognitive Linguistics?

Cognitive Linguistics is a new approach to the study of language which views   linguistic knowledge as part of general cognition and thinking; linguistic behaviour is not separated from other general cognitive abilities which allow mental processes of reasoning, memory, attention or learning, but understood as an integral part of it. It emerged in the late seventies and early eighties, especially through the work of George Lakoff, one of the founders of Generative Semantics, and Ronald Langacker, also an ex-practitioner of Generative Linguistics. As a consequence, this new paradigm could be seen as a reaction against the dominant generative paradigm which pursues an autonomous[2] view of language (see Ruiz de Mendoza, 1997).

Some of the main assumptions underlying the generative approaches to syntax and semantics are not in accordance with the experimental data in linguistics, psychology and other fields; the 'generative commitment' to notational formalism, that is to say the use of 'formal grammars' which view languages as systems of arbitrary symbols manipulated by mathematical rules of the sort first characterised by Emil Post, is employed at the expense of descriptive adequacy and psychological realism (see Lakoff, 1987). What Lakoff (1990: 43) refers to as 'non-finitary phenomena', i.e. mental images, general cognitive processes, basic-level categories, prototype phenomena, the use of neural foundations for linguistic theory and so on, are not considered part of these grammars because they are not characterisable in this notation. It is from this dissatisfaction with the dominant model that Cognitive Linguistics was created.

Although Cognitive Linguistics as a general framework emerged in the late seventies, it is important to bear in mind two points. Firstly, some of the cognitive assumptions central to this approach are not new. Authors such as Geeraerts (1988), Jäkel (1999), Nerlich and Clarke (2001a, b, 2002) and Taylor (1995) have shown that many of the ideas that I will

[2] The view that language is an autonomous entity goes back to Structuralism (De Saussure, 1915; Bloomfield, 1914, 1933). In this model, the meaning of a word is determined by the language system itself, whereas people's perception, interaction and conceptualisation are extra-linguistic factors. In the Generative approach (Chomsky, 1986), language is also viewed as autonomous but in a rather different way. The language faculty itself (a computational device which is said to generate the sentences of a language through the recursive rules on structured strings of symbols, assigning syntax and semantics) is viewed as an autonomous component of mind, independent of other mental faculties.

present in more detail in this article were already in the minds of earlier philosophers, thinkers and philologists. However, this fact must not be understood as diminishing the originality of Cognitive Linguistics, but quite the opposite. As Jäkel (1999: 23) convincingly argues:

> scholars of completely different backgrounds have reached the same or very
> similar results independently of each other,

and this fact has to be taken as a confirmation for the validity of the cognitive principles postulated by this approach.

Secondly, cognitive Linguistics is not a totally homogeneous framework. Ungerer and Schmid (1996) distinguish three main approaches: the Experiental view, the Prominence view and the Attentional view of language.

The 'Experiental view' pursues a more practical and empirical description of meaning; instead of postulating logical rules and objective definitions based on theoretical considerations, this approach focuses on what might be going on in the minds of speakers when they produce and understand words and sentences.

Within this framework, the knowledge and experience human beings have of the things and events that they know well, is transferred to those other objects and events with which they may not be so familiar, and even to abstract concepts. Lakoff and Johnson (1980) were among the first to pinpoint this conceptual potential[3], especially in the case of metaphors. However, this does not only apply to the field of metaphor but also to other figurative resources which are considered as deviant from the rules of grammar in more traditional generative linguistics, such as metonymy (Panther and Radden, 1999; Radden and Kövecses, 1996; Kövecses and Radden, 1998; Ruiz de Mendoza, 1999).

The 'Prominence view' is based on concepts of profiling and figure/ground segregation, a phenomenon first introduced by the Danish gestalt psychologist Rubin. The prominence principle explains why, when we look at an object in our environment, we single it out as a perceptually prominent figure standing out from the background. This principle can also be applied to the study of language, especially to the study of local relations (cf. *inter alia* Brugman, 1981; Casad, 1982, 1993; Cuyckens, 1991; Lindner, 1982; Herskovits, 1986; Vandeloise, 1991). It is also used in Langacker's (1987, 1991a) grammar where profiling is

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[3] When we say 'the first', we mean within the Cognitive Linguistics framework. As Nerlich and Clarke argue, many of the basic ideas in this approach have "their roots in various philosophical, linguistic and psychological reflections on metaphor production and comprehension which stretches (at least) from Locke's recognition that our basic mentalistic concepts are metaphorical to Bühler and Stälin's psychological and experimental work on metaphorical blending in the 1930s" (2002: 555).

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used to explain grammatical constructs   while figure and ground is employed for the explanation of grammatical relations.

Finally, the 'Attentional view' assumes that what we actually express, reflects those parts of an event which attract our attention. A main concept in this approach is Fillmore's (1975) notion of 'frame', i.e. an assemblage of the knowledge we have about a certain situation. Talmy (1991) uses the notion of frame to analyse event chains and cognition. Event frames are sets of conceptual elements and relationships that co-evoke each other and that are shared by speakers. This author shows that certain parts of an event-frame are sometimes brought into the foreground while others are kept in the background. That is to say, we highlight different aspects of a frame based on our cognitive ability to direct our attention. This cognitive process, which Talmy calls the 'windowing of attention', results in different linguistic expressions. A type of event-frame is, for instance, the motion event. It consists of a set of central defining elements such as figure, ground, path, motion, manner, and cause. Talmy (1985, 1991, 2000) shows that different languages use specific framing devices, so that motion event elements such as path and manner are reflected in different ways in various languages.

Despite these three different viewpoints in Cognitive Linguistics, the majority of linguists working within this paradigm share the view that linguistic knowledge is part of general thinking and cognition. In the following sections I outline the main theoretical and methodological tenets behind this approach.[4] Since the main aim of this article is to provide the Basque linguistics community with the basics of a new framework, all the examples that I will use to illustrate each of the theoretical and methodological principles will be drawn from this language, and in most cases, from previous work I have carried out in this area.

2.   Theoretical principles in cognitive linguistics

It is very difficult to summarise in just a few words what the main theoretical ideas underlying a linguistic paradigm are, especially in a field as heterogeneous as Cognitive Linguistics. However, if I had to be concise in describing its foundations, I would consider the following as the main pillars of the whole theory:

　　　(i) Language is an integral part of cognition

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[4] What I present here is only a brief overview of such principles. For a more complete discussion and introduction of Cognitive Linguistics, the reader can consult Cuenca and Hilferty (1999), Gibbs (1994), Taylor (1995), Ungerer and Schmid (1997), as well as the journal *Cognitive Linguistics* published by Mouton. There are also websites where one can find useful information and links to other related sites: the International Cognitive Linguistics Association (www.cognitivelinguistics.org) and the Spanish Cognitive Linguistics Association (www.um.es/~lincoing/aelco).

(ii) Language is symbolic in nature.

Let us develop briefly these two tenets.

2.1 Language as an integral part of cognition

Language is understood as a product of general cognitive abilities. Consequently, a cognitive linguist must be willing to accept what Lakoff (1990: 40) calls the 'cognitive commitment', that is, s/he must be prepared to embrace the link between language and other cognitive faculties because linguistic theory and methodology must be consistent with what is empirically known about cognition, the brain and language. This position is based on a functional approach to language. As Saeed (1997: 300) explains, this view implies that:

> externally, principles of language use embody more general cognitive principles; and internally, that explanation must cross boundaries between levels of analysis.

In other words, the difference between language and other mental processes is not one of kind, but one of degree. Consequently, not only linguistic principles must be investigated in reference to other mental faculties, but also any account of the different levels of linguistic analysis (syntax, semantics, phonology…) must be carried out taking into account all of these levels simultaneously.

This view of language is rather different from more formal approaches to language such as Generative Linguistics (Chomsky, 1988), Fregean semantics (Geach and Black, 1952), and Montague's Model-theoretical semantics (Dowty *et al*., 1981, Cann, 1993). These formal approaches, based on a more 'objectivist'[5] philosophical tradition, understand knowledge of linguistic structures and rules as independent of other mental processes such as attention, memory, and reasoning: they propose that different levels of linguistic analysis form independent modules.

2.2 Language is symbolic in nature

Langacker (1987: 11) starts his chapter on the general assumptions of his *Foundations of Cognitive Grammar* precisely with this assertion, namely that language:

> makes available to the speaker… an open-ended set of linguistic signs or

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[5] This term is used by Lakoff (1987, 1988) and Johnson (1987) to refer to those theories of meaning that understand objective reality as independent of human cognition.

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expressions, each of which associates a semantic representation of some kind
with a phonological representation.

Hence, language is symbolic because it is based on the association between semantic representation and phonological representation. This association of two different poles refers to the Saussurian conception of the linguistic sign. However, it is radically different on one basic point: the arbitrariness of the sign.

While it is true that there is always a certain essential arbitrary component in the association of words with what they mean, nonetheless, this arbitrariness is very restricted. The choice of the sequence of sounds *ikusi* in Basque (or *see* in English, *ver* in Spanish) to express the concept of vision as in 1) is arbitrary. However, what it is not arbitrary is the fact that these same sequences of sounds are also used to express knowledge as in 2). As Sweetser (1990: 5) points out, we intuitively notice that there must a reason why we can use the same verb *ikusi* in these two 'apparently' unrelated domains, perception and cognition. We sense that this choice is not random, but well-motivated.

1)   *Etxea ikusten dut*
       house.abs see.hab aux
       'I see the house'
2)   *Orduan ez nuen ikusi zer esan nahi zuen*
       hour.loc neg aux see.per what say.per want aux
       'I didn't see at the time what he wanted to say' (ELH, 1996)

Cognitive Linguistics explains the link between perception and cognition in these two examples on the basis of our conceptual organisation. We perceive and understand these two processes as related. On the basis of our experience as human beings, we see similarities between vision and knowledge, and it is because of these similarities that we conceptualise them as related concepts. For cognitive linguists, language is not structured arbitrarily. It is motivated and grounded more or less directly in experience, in our bodily, physical, social, and cultural experiences because after all, "we are beings of the flesh" (Johnson 1992: 347). This notion of a 'grounding' is known in Cognitive Linguistics as 'embodiment' (Johnson, 1987; Lakoff, 1987; Lakoff and Johnson, 1980, 1999) and finds its philosophical roots in the phenomenological tradition (Merleau-Ponty, 1962, 1963; cf. also Varela, Thompson and Rosch, 1993). Its basic idea is that mental and linguistic categories are not abstract, disembodied and human independent categories; we create them on the basis of our concrete experiences and under the constraints imposed by our bodies.

This kind of embodiment corresponds to one of the three levels that Lakoff and Johnson (1999: 103) call the 'embodiment of concepts'. It is the 'phenomenological level' which:

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consists of everything we can be aware of, especially our own mental states,
our bodies, our environment, and our physical and social interactions.

This is the level at which one can speak about the feel of experience, the distinctive qualities of experiences, and the way in which things appear to us. There are two more levels of embodiment: the 'neural embodiment' which deals with structures that define concepts and operations at the neural level[6], and the 'cognitive unconscious' which concerns all mental operations that structure and make possible all conscious experience. According to these authors it is only by means of descriptions and explanations at these three levels that one can achieve a full understanding of the mind.

3. Methodological principles in cognitive linguistics

This conception of language as symbolic and cognitive in nature underlies specific positions taken by cognitive linguists on a number of issues such as human categorisation and meaning, issues that are central to any study under this approach. Let us describe them very briefly.

3.1 Human categorisation and prototype theory

Human categorisation is one of the major issues in Linguistics. The ability to categorise, i.e. to judge that a particular thing is or is not an instance of a particular category, is an essential part of cognition. Categorisation is often automatic and unconscious, except in problematic cases. This can cause us to make mistakes and make us think that our categories are categories of things, when in fact they are categories of abstract entities. When experience is used to guide the interpretation of a new experience, the ability to categorise becomes indispensable. How human beings establish different categories of elements has been discussed ever since Aristotle.

The classical view on categorisation, that of Aristotle[7], claims that categories are defined in terms of a conjunction of necessary and sufficient binary features: that linguistic analytical categories impose a set of necessary and sufficient conditions for the membership in the category. This requirement not only implies that categories have clear boundaries and that all

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[6] The NTL group at Berkeley (formerly the L^0 group) is currently working on this neural embodiment level, especially on the neural correlates of basic embodied concepts (Bailey, 1997; Narayanan, 1997; Regier, 1996). More information at http://www.icsi.berkeley.edu/~NTL.

[7] Aristotle distinguished between the essence of a thing (what makes a thing be what it is, indicates its individuality, its destruction is the destruction of all) and the accidents of a thing (incidental properties, not the determining part).

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members of a category have equal status (Taylor 1995: 25), but also that there is an abstract, general definition with which all the members of that category must comply.

Applying this notion of category and categorisation to the study of words and their polysemous senses, words would be considered as categories and their polysemous senses as members of such a category. Under the classical approach to categorisation, this would mean that all these polysemous senses are equally important members, none of the possible semantic extensions of a given word is more central than the rest, and they comply with a general abstract definition that accounts for the word which they belong to. Let us illustrate this point with the word *buru* 'head'.

Buru is a very rich polysemous word in Basque (Ibarretxe-Antuñano 2002a). Among its possible senses, we can find that *buru* means 'part of the human body' in *Jonek buru handia dauka* 'John has a big head', 'pommel of a sword' in *ezpataren burua* (ELH, 1996) and 'fountain source' in *iturburu*. According to the classical definition of category that I have offered above, it could be argued that all of these senses are related to one general, core abstract sense of *buru*, which could be expressed as 'an extremity of something'.

However, this abstract definition of 'core meaning' is problematic; as Sweetser (1986) points out, in cases when the extension of meaning has been carried out by means of metaphor or metonymy, it is very difficult to identify this abstract meaning. Although in the examples above, the core meaning 'an extremity of something' appears appropriate, it cannot account for other instances of *buru* illustrated in examples 3) to 6).

3) *Ez zait burutik joango esan didazuna*
     neg aux head.abl go.fut say.per aux.what
     'I won't forget what you told me' (IS)
4) *Artalde bat zazpi mila buruekin*
     herd one seven thousand head.pl.com
     'a herd with seven thousand head of cattle' (ELH, 1996)
5) *Ekonomiari buruz hitzegin zuen hizlariak*
     economy.dat head.inst talk.hab aux speaker.erg
     'The speaker talked about the economy' (HM, 1996)
6) *Esaten nion nire buruari*
     say.hab aux my head.dat
     'I was saying to myself' (Michelena, 1987)

In these latter cases *buru* means 'memory', 'head of cattle', 'about', and 'myself' respectively. These senses do not seem to have much in common with the core sense of 'extremity of something' and therefore, according to our classical approach, they could not be members of the same category. However, they do belong to the category *buru*. A possible solution would be to suggest a different core meaning that includes all of them.

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Unfortunately, this situation leads us to another problem: no matter how complex this core abstract meaning might be, it will fail to cover some perfectly valid usages.

These meanings would not pose such a problem for Cognitive Linguistics. Instead of relating these different senses to an abstract default sense that includes all of them, the cognitive approach adopts a prototype categorisation model (cf. Rosch, 1973, 1977, 1978, 1983; Rosch and Mervis 1975; Mervis and Rosch, 1981 and see also Kleiber, 1995 for a critical overview). In this model human categories have two types of members: the 'prototype' and several less central members related to the former in a motivated way. The prototype is the best, the most prominent and the most typical member of a category. It is the example that first comes to mind when one thinks of that category. In other words, category members do not have equivalent status, some are more important or central than others.

In prototype categorisation[8], categories are also based to some extent on what Wittgenstein (1953) called 'family resemblance'. This philosopher, using the concept of *game*, showed that necessary and sufficient conditions are not appropriate for defining the meanings of many words, because these could resemble one another in different ways. The relations between members of a given category are like those in a family: a daughter might resemble her mother, and the mother her father, but this does not necessarily mean that grandchild and grandfather are alike. In terms of prototype theory, this means that the central member and the less central ones are not necessarily linked directly; a less central member can be included in the same category via its 'resemblance' with another less central member which does have a direct relation with the prototype. In other words, category members share some properties but these are not necessary and sufficient in order to become members.

Going back to our example of *buru* and its polysemous senses, a cognitive methodology would identify the prototypical use of *buru* as that of referring to a 'part of the body', and would treat the other uses of this lexical item as motivated, non-prototypical senses, related to the prototypical sense in a systematic way. These less central senses would share some, but not all the properties that characterise the central member. For example, *ezpataren burua* 'pommel of a sword' and *iturburu* 'fountain source' would share with the central member the property of 'extremity', that is, the head as part of the body located in an extreme, is what all these semantic extensions have in common. *Buru* in (3), on the other hand, is related to the central member because it is the part of the body where our brain is, and therefore, where our

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[8] See Lakoff (1987, Ch. 2) and Taylor (1995, Ch. 3, 2) for discussion on early development research into categorisation. See Ungerer and Schmid (1996) for an overview on 'Prototypes and Categories' (Ch. 1) and 'Levels of Categorisation' (Ch.2).

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cognitive capacities are located. Less central members would be linked to the central sense by means of cognitive mechanisms such as metaphor[9] as in 3), 5), and 6) and metonymy as in (4). The relationships between central and less central members are represented in what Lakoff (1987) calls radial categories (see also Geeraerts, 1995; Rice, 1996; Sandra and Rice, 1995 for a critical overview). Figure 1 shows the radial network for some of the meanings of *buru*.[10]


3.2   Classical dichotomies blurred

Cognitive Linguistics tries to break down the specialisations and abstractions of formalism. As a consequence, there is a tendency to blur classical distinctions and dichotomies between linguistic knowledge and encyclopaedic, real world knowledge; between literal and figurative language; between synchronic and diachronic linguistics…

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[9] As Ibarretxe-Antuñano (2002) points out, some of these metaphorical mappings could be understood as metonymy-based metaphors, that is, "mapping[s] involving two conceptual domains which are grounded in, or can be traced back to, one conceptual domain" (Radden, 2000: 215) (see Section 3.4).
[10]

[1] Due to space constraints, what I offer here is just a brief exposition of the polysemy that exists in the Basque word *buru*. For a complete analysis, see Ibarretxe-Antuñano (2002b).

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Figure 1 Radial network for meanings of *buru*
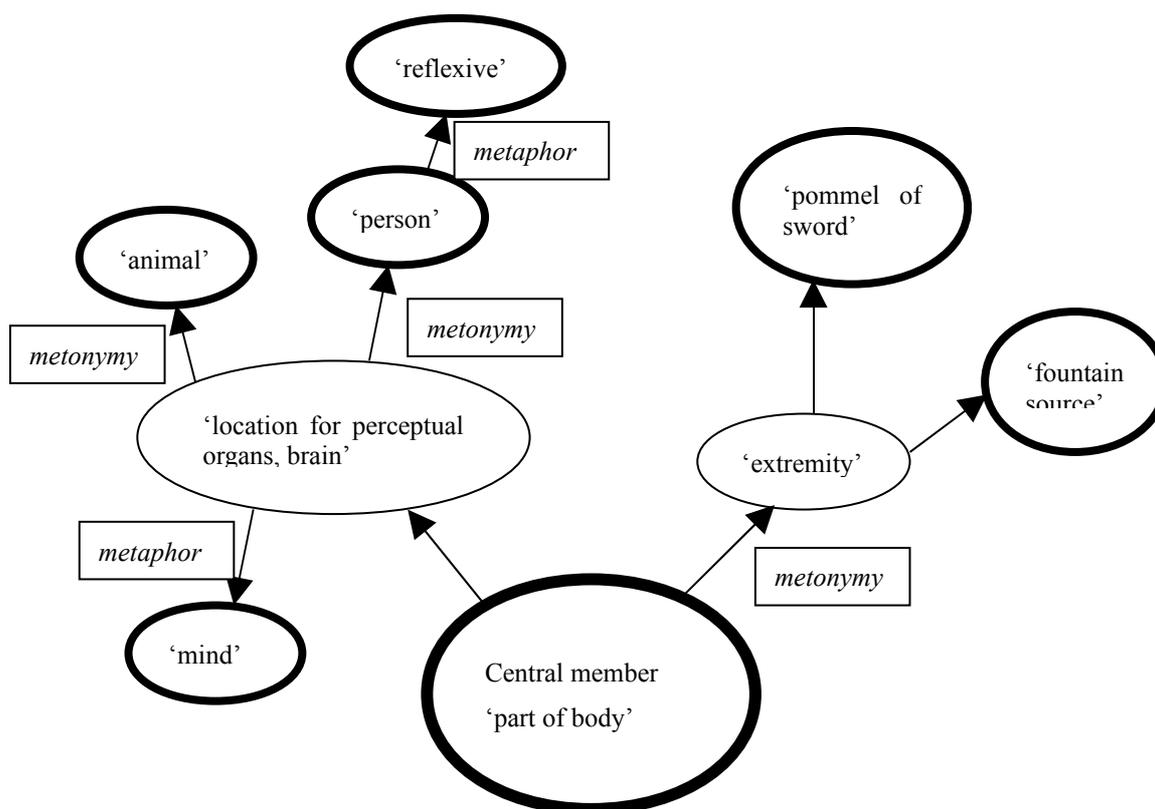
For Cognitive Linguistics, however, this distinction is not strict. Meanings are cognitive structures embedded in our patterns of knowledge and belief. They reflect the mental categories which people have created from their experiences of growing up and acting in the world (cf. embodiment). Conventional meanings arise from experience and knowledge and our complex conceptual structures are invoked in language use and comprehension.[11] Furthermore, the fact that our experience-based knowledge is present in linguistic meaning at every level implies that there is not a strict distinction between lexicon and grammar. This means that firstly lexicon and grammar form a continuum (Langacker, 1987), that they cannot be treated as autonomous modules as postulated in Chomskyan linguistics; secondly, on the continuum, they correspond to very specific conceptualisation, i.e. the lexicon for specific entities or relations, the grammar for more abstract conceptualisations (cf. Talmy, 1988).[12] As Langacker (1987: 3) states:

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[11] That is why meaning is claimed to be ultimately pragmatic.

[12] I would like to thank an anonymous reviewer for pointing out this distinction to me.

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Lexicon, morphology, and syntax form a continuum of symbolic structures, which differ along various parameters but can be divided into separate components only arbitrarily.

The Saussurean dichotomy between synchrony and diachrony also disappears. Many linguistic theories have accepted Saussure's (1915) attempt to free linguistics from etymological explanation. However, the study of the evolution of linguistic structures and their processes of change can lead us to a better understanding of the current use of the language; it can provide evidence of general linguistic and cognitive principles (cf. Hopper and Traugott's (1993) and Heine, Claudi and Hünnemeyer's (1991) 'Grammaticalisation theory').

3.3 Cognitive domains in language

This relation between language and experience has led cognitive linguists to study how conceptual structures or cognitive models are reflected in language. As stated in the previous section, for most cognitive linguists, there are no clear boundaries between linguistic knowledge and encyclopaedic knowledge; meaning is inherently encyclopaedic and therefore, we cannot disassociate strictly denotative aspects from those connotative ones (Cuenca and Hilferty, 1999: 70). Cognitive domains are the proof that we need to show that this disassociation is an artificial one. They are knowledge structures, mental representations about how the world is organised. As Langacker (1987: 147) points out, they are "context[s] for the characterisation of a semantic unit", that is, coherent knowledge structures that function as contexts, as frames that situate more specific concepts in their right conceptual environment. Let us illustrate this point with one of Langacker's classic examples: the word *astelehena* 'Monday' (cf. Langacker 1987: 147ff).

If we ask ourselves about the meaning of this word a*stelehena* 'Monday', we will probably say that it is a day of the week. But if we had to give a definition of this word without recourse to the concept of week, it would be totally impossible for us to do so. *Astelehenak* 'Mondays', *larunbatak* 'Saturdays', as well as any other day of the week are not 'definable' without situating them in a specific conceptual environment, without a suitable conceptual domain that will help us to bring about all the necessary knowledge and information. It is in this sense that Langacker (1987: 147) says that:

> all linguistic units are context-dependent to some degree […] Most concepts presuppose other concepts and cannot be adequately defined except by reference to them, be it implicit or explicit.

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Similar to this notion of cognitive domain[13], we find what Lakoff (1987) and Fillmore (1982, 1985) have called Idealised Cognitive Model (ICM) and Frame respectively. According to Lakoff (1987: 278ff), the human capacity for conceptualisation consists of two main abilities: (i) the ability to form symbolic structures in correlation with preconceptual structures created in our everyday experience and (ii) the ability to project metaphorically from structures in the physical domain to structures in the abstract domain. At a higher level, the human capacity for conceptualisation is able to form complex concepts and general categories using 'image schemas' as structuring devices. At an even higher level human minds construct complex event structures which are called 'Idealised Cognitive Models' or ICMs.

As Ruiz de Mendoza (1999: 9) points out, although Lakoff has not given a specific definition of what an ICM is, it can be understood as a conventional conceptual representation of how we perceive reality. It is a model because without being real it tries to be similar to reality. It is cognitive because it is construed in the mind. It is idealised because it is the result of a certain kind of regularity extracted from the characteristics of many regular and common experiences. An ICM is, therefore, a complex structured whole or gestalt which allows us to organise our knowledge. Among the results or by-products of such organisation we find category structures and prototype effects. ICMs do not exist objectively in nature; they are created by human beings. According to Lakoff (1987: 113-114), there are four different types of cognitive models:

> (i) 'Propositional models' specify elements, their properties, and the relations holding between them. Lakoff compares them to Fillmore's (1982, 1985) 'frames' (see below).
> (ii) 'Image-schematic models' specify schematic images, such as trajectories, shapes or containers (see Section 3.4)
> (iii) 'Metaphoric models' are mappings from a propositional or image-schematic model in one domain to a corresponding structure in another domain
> (iv) 'Metonymic models' where "given an ICM with some background condition there is a 'stands for' relation that may hold between two elements A and B, such that one element of the ICM, B, may stand for another element A" (1987: 78).

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[13] We use the word 'similar' with respect to cognitive domains, ICMs, and frames because all of these mechanisms point to the encyclopaedic nature of meaning, that is to say, the meaning of linguistic expressions evokes multiple knowledge structures and is based on our experience. See Ruiz de Mendoza (1999, Ch. 2, 3) for a critical analysis and comparison between these terms.

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Metonymic models are also the source of prototype effects such as stereotypes, radial structures, social stereotypes, typical examples, ideals, paragons, generators, submodels and salient examples (see Lakoff 1987: 74 ff).

In some cases one ICM is not enough to define the meaning of words, and therefore it is necessary for cognitive models to "combine to form a complex cluster that is psychologically more basic than the models taken individually" (1987: 74). These are what Lakoff calls 'cluster models'. For example, the semantic category *ama* 'mother' could not be described only by the use of one single cognitive model. A mother is not only the person who gives birth, but also the person that takes care of a child. Consequently, *ama* cannot be defined by just one single ICM, the concept of *ama* needs a cluster of several ICMs such as 'the birth model (the person who gives birth); 'the genetic model' (the female who contributes the genetic material); 'the nurturance model' (the female adult who nurtures and raises a child); 'the marital model' (the wife of a father); 'the genealogical model' (the closest female ancestor).

Another notion similar to that of cognitive domain is Fillmore's frame. Fillmore coined this word to describe "specific unified frameworks of knowledge, or coherence schematisations of experience" (1985: 223), but he is not the first one to use this word for similar descriptions. The term 'frame' had been also employed in linguistics by authors such as Harris (1946) in the sense of the syntactic environment of a certain syntactic category, as well as in Artificial Intelligence by authors such as Minsky in the sense of "a data-structure for representing a stereotyped situation" (1975: 212).[14] However, Fillmore is the first to adopt a more semantically, rather than syntactically oriented definition of 'frame' as a cognitive construct that represents the structured knowledge and beliefs pertaining to specific and recurring situations. In Fillmore's own words:

> [a] system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits; when one of such structures is introduced into a text, or into a conversation, all of the others are automatically made available (1982: 11).

In order to develop a frame it is necessary to follow three steps:[15]

(i) Identify the scenario, phenomena, and experiences conceptualised in the

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[14] Minsky further argues that when we view situations from a sequential point of view, we go beyond simple frames and move into what he calls 'scenarios', i.e. knowledge structures particularly designed for frequently recurrent event sequences". This notion has been subsequently called 'scripts' (Schank and Abelson, 1977). See Ungerer and Schmid (1996, Ch. 5) for a discussion and comparison of these terms.

[15] This description of a semantic frame is adapted from the Berkeley FrameNet project manual (C. Johnson et al., 2001). The aim of this project is the creation of an online lexical resource for English, based on Fillmore's frame semantics and supported by corpus evidence. More information at [http://www.icsi.berkeley.edu/~framenet].

target words to be analysed and the sentences in which they occur.
(ii) Identify and label frame elements, i.e. props and participants in the frame; parts or aspects of the sentences associated with specific means of linguistic expression.
(iii) Describe the way in which a word, together with the construction in which it participates, gives information about instances of the frame in question.

Let us illustrate this process with a simplified description of one frame, the 'Commercial Transaction Frame'. The phenomena and experiences involved in this frame are concepts such as possession, exchange, change of possession, and money. The main frame elements that we need to include are the Goods, the Money, the Buyer, and the Seller. Finally, the description of the meaning, uses, and grammatical structuring of the related vocabulary on the basis of these concepts corresponds to such words as: *erosi* 'buy', *saldu* 'sell', *ordaindu* 'pay', *truke* 'change', *prezio* 'price', *zor* 'debt', *denda* 'shop', and so on.

3.4 Imagination as a human cognitive ability: metaphor, metonymy and blends.

Another consequence of primacy being given to general cognitive abilities is the essential role of imagination. For many people, the word imagination is related to subjectivism, idealism, and relativism. Since the Enlightenment[16], imagination has been despised in many theories of language, because it has been regarded as a non-rational, unruly, and idiosyncratic play of ideas, and therefore, unsuitable for scientific research. In Cognitive Linguistics, imagination is considered to be a basic human cognitive ability, central to human meaning-making and rationality. As Johnson (1987: 172) explains, the way we reason and what we can experience as meaningful are both based on structures of imagination that make our experience what it is. We make sense of our less directly apprehensible experiences on the basis of more directly apprehensible experiences. For instance, Ibarretxe-Antuñano (1999a, b) has shown how we project part of our bodily experience with the senses onto our experience of having a suspicion in the case of smell as in 7), or onto our experience of being emotionally affected in the case of touch as in 8).[17]

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[16] See Johnson (1987, Ch. 6) for an account of the history of Imagination.

[17] As the reader may have become aware, the links between smell and suspicion, and touch and feelings – as well as most of the examples that we have used in this paper – are not just found in Basque (see for instance, Spanish *Olerse algo raro* and *Tocar el corazón de alguien* or English *To smell fishy* and *To touch somebody's heart*). We illustrate these correspondences with Basque examples because, as we have said in the beginning, this is an introduction to the main tenets of Cognitive Linguistics with a special focus on Basque. However, we have to bear in mind that the correspondences between these cognitive experiential domains are not language specific in most cases, but cross-linguistic. These correspondences are based on our everyday experience as human beings in a specific cultural environment, and therefore, it is only natural that similar mappings occur in languages whose speakers share the same background. If this were not case, the theory of 'embodied realism' that we have explained in Section 2.2 and presented as one of the main tenets in Cognitive Linguistics would be a complete fallacy.

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7)   *Sailburuaren kontuak zuzenak ez zirela erraz usan zitekeen*
        minister.poss account.pl.abs right.pl.abs neg aux.compl easily smell.per aux
        'It was easy to suspect that the minister's accounts were not clear' (1999b: 32)

8)   *Edertasunak ukitu du azkenean Iñakiren bihotz gogorra*
        beauty.erg touch.per aux last.loc Iñaki.poss heart hard.abs
        'In the end, beauty has changed Iñaki's hard feelings' (1999a: 74)

Metaphor and metonymy are two basic imaginative cognitive mechanisms. They are not figures of speech, as they are considered by many traditional objectivist approaches (see, for example, Halliday, 1985: 319-20); not even the result of a wide array of contextual implications, as proposed by Relevance theory (Sperber and Wilson, 1995: 231-37; Papafragou, 1996; Goatly, 1997).[18] Rather they are considered to be the means by which it is possible "to ground our conceptual systems experientially and to reason in a constrained but creative fashion" (Johnson, 1992: 351). Furthermore, metaphor and metonymy are defined as 'mappings' or 'projections' between conceptual domains. These two cognitive devices can be distinguished because the connections made between things are different for each case (Lakoff and Turner, 1989). Whereas in metaphor, the mapping is across different experiential domains (Lakoff, 1993); in metonymy, the mapping takes place within the same domain.

For instance, in a sentence like 9) we have two different experiential domains: the source domain of the bodily act of visual perception and the target domain that of intellection.[19] The mapping between these two different conceptual domains is carried out by means of metaphor.

9)   *Erabaki aurretik ongi ikusi behar dut zein onura duen*
        decide.per front.abl well see.per must aux which advantage aux.comp
        'Before I decide I should see which advantages it has'

However, in 10) the mapping does not take place between different conceptual domains, but within the same domain through metonymy; instead of the word *gazta* 'cheese', we have the name of the place where the cheese is produced.[20]

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[18]   Johnson (1992), Dirven (1993), Gibbs (1994), Cameron and Low (1999) are good reviews of different approaches to these two tropes (mainly metaphor).

[19] The conceptual metaphor UNDERSTANDING IS SEEING is perhaps one of the classical examples within the theory of conceptual metaphor, and as such, there are many studies which use as the focus of analysis, see for examples Grady and Johnson (2002: 540-542), Johnson (1999) among others.

[20] Radden and Kövecses (1996: 15) call this metonymy PLACE FOR THE PRODUCT MADE THERE, and include it in the *Production ICM*.

10)		*Mirenek Idiazabala jan zuen*
		mary.erg idiazabal.abs.det eat.per aux
		'Mary ate the Idiazabal'

Research on metaphor occupies a central position in Cognitive Linguistics. One of the major problems that cognitive linguists still face is the question of how to constrain metaphorical mappings. Attempts to constrain the mapping process in metaphorical production and comprehension can be found in Lakoff's (1990, 1993) 'Invariance Principle'[21], i.e.

> metaphorical mappings preserve the cognitive topology of the source domain in a way consistent with the inherent structure of the target domain" (Lakoff, 1993: 215).

The Invariance Principle is useful in order to constrain the nature of those mappings: it is not possible to map from the source domain, a structure that does not preserve the inherent structure of the target domain. The only problem with this principle is that it does not show exactly what part of the source domain is the one that must be consistent with the structure of the target domain.[22]

Metonymy has received less attention than metaphor in Cognitive Linguistics.[23] Although early studies, such as Lakoff and Johnson (1980, Ch. 8) and Lakoff (1987, Ch. 5-8 and Case Study 2), have stressed its importance for categorisation, it was not until recently that metonymy came to occupy a central position. Radden and Kövecses (1996) and Kövecses and Radden (1998) propose a working definition for metonymy based on Lakoff's theory of ICMs and on Langacker's (1993) formulation[24] that metonymy is a cognitive process through which we acquire access to a mental activity via another mental activity. Kövecses and Radden (1998: 39) define metonymy as:

> a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same domain, or ICM.

This view of metonymy involves four questions that need to be addressed in the framework of metonymy:

		(i)		identification of the ontological realms where metonymy can occur;

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[21] See also Lakoff and Turner (1989: 82), Brugman (1990), Turner (1987: 143-148; 1990; 1991: 172-182; 1996), Jäkel (1997).

[22] As a possible solution, Ibarretxe-Antuñano (1999a, Ch. 6) proposes the 'Property Selection Process', i.e. the selection in the target domain of some properties from the set of prototypical properties that characterise the source domain. The set of prototypical properties is drawn from the physical experience and knowledge that human beings have of that particular source domain. This set constitutes the bodily basis of such extended meanings.

[23] For a review of the research on metonymy in Cognitive Linguistics, see Barcelona (1988, 2000a), Gibbs (1994, Ch.7), and Ruiz de Mendoza (1999).

[24] "The entity that is normally designated by a metonymic expression serves as a reference point affording mental access to the desired target (i.e. the entity actually being referred to)" (Langacker 1993: 30).

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(ii)   specification of the types of conceptual relationships between the metonymic elements;

(iii)   definition of the cognitive and communicative principles that select the most 'natural' vehicle-to-target routes;

(iv)   definition of the conditions for the selection of 'non-default routes'.

Another important and interesting area of research is the interaction between metaphor and metonymy. Goossens (1990) proposes the term 'metaphtonymy' to cover the possible interrelations between metaphor and metonymy. Among these interrelations, he distinguishes two as the dominant patterns: one where the experiential basis for metaphor is a metonymy ('metaphor from metonymy') and another where a metonymy functioning in the target domain is embedded within a metaphor ('metonymy within metaphor'). Radden (2000: 15) argues that a great number of metaphors is experientially grounded on metonymies, and proposes what he calls 'metonymy-based metaphors'. These are "mapping[s] involving two conceptual domains which are grounded in, or can be traced back to, one conceptual domain". Although Radden does not claim that all metaphors are motivated by metonymies, a position taken by Barcelona (2000b), he does suggest that many are. As a consequence Radden proposes a continuum of mapping processes where the traditional notions of metaphor and metonymy are only the prototypical categories at both ends, and metonymy-based metaphors occupy the range in the middle.

Ibarretxe-Antuñano (2002b) applies this notion of metonymy-based metaphor to the study of the polysemous word *buru* 'head'. *Buru* is a highly polysemous word not only because it refers to this body part but also because it can be used in a wide variety of contexts. *Buru* can also mean 'top or summit' as in *mendiburu* 'lit. mountain top'; 'ear of corn' as in *artaburu* (lit. 'corn head'); 'important place' as in *mahaiburu* 'head of the table'; 'hair' as in *buruorratz* 'hairpin'; 'boss, leader' as in *buruzagi*; 'end, conclusion' as in *buru eman* 'to conclude' (lit. 'head give'); 'intelligence' as in *buruargi* (lit. 'head light'); and 'self' as in *burumaisu* 'self-taught person' (lit. 'head teacher'). This author links all these apparently unrelated senses of *buru* to its central meaning as a body part by means of several metonymies such as PART-FOR-WHOLE, WHOLE-FOR-PART, ENTITY FOR SITUATION, and on the basis of these metonymies via metaphors. For instance, let us look at the use of *buru* in 11).

11)   *Hiru egunen buruan biztuko naiz*
       three days.gen head.loc revive.fut aux
       'After three days I will come to life again' (IS)

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The postposition *buru* in the locative case and preceded by a noun in the genitive case means 'after, at the end' in Basque. In 11), the noun *buru* refers to the end of a period of time. It is only after the completion of these three days that this person would come to life again. The fact that we understand *buru* in terms of time is possible thanks to the TIME AS SPACE metaphor, more concretely, to the LOCATION IN TIME IS LOCATION IN SPACE metaphor, which establishes mappings between these two different conceptual domains, space and time. But apart from this metaphor, there is also a metonymy at work in this expression. Head in these cases is not understood as part of a body; it metonymically refers to its location with respect to a body. Therefore, we can say that this is an example of the BODY PART FOR LOCATION metonymy. More concretely, we could specify this metonymy a little further and call it HEAD FOR EXTREMITY metaphor, since, as Ibarretxe-Antuñano shows, head in Basque is conceptually understood as an 'extreme' of the body.[25]

In many cases, some experiences are more directly mapped and understood metaphorically or metonymically on the basis of 'image schemas'. These are abstract and pre-conceptual gestalt structures based on our perceptual interaction, bodily experience and motor programmes which organise our experience and comprehension.

> 12)   *Prezioek gora egin dute*
>   price.pl.erg above.all make aux
>   'Prices have gone up'

Sentences such as 12) are based on the metaphor MORE IS UP / LESS IS DOWN (Lakoff and Johnson, 1980). This metaphorical projection from MORE to UP is in turn based on our understanding of quantity in terms of the VERTICALITY schema. This schema is based on our everyday bodily experience, e.g. whenever we put more liquid in a container, the level goes up.

Other basic conceptual schemas are: The CONTAINER schema defines the predicates IN and OUT[26], and works as the basis for the understanding of the body as a container, the visual field, and set models. The LINK schema helps to conceptualise social and interpersonal

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[25] One of the characteristics of the conceptualisation of *buru* in Basque is that, contrary to what one can intuitively expect, *buru* does not seem to refer to the 'top' location. We have to bear in mind that the head can be conceptualised as 'top' only if we take an anthropomorphic model, where it is indeed situated at the top, but not if we take a zoomorphic model where the head is at the front instead (see Clark (1973) and Svorou (1993) for more information on these issues). Evidence from Basque shows that *buru* is only conceptualised as 'extremity', and it is thanks to the other co-occurring words and context that one can decide whether it refers to top, beginning or end. Therefore, although Basque words such as *mendiburu*, *asteburu* and *iturburu* are usually translated as 'top of the mountain', 'week-end' and 'fountain source', their 'literal' translation would be 'extremity of a mountain', 'extremity of a week' and 'extremity of a fountain'.

[26] The CONTAINER schema applies to the prepositions *in* and *out* in English, and to the postpositions *barru* and *kanpo* in Basque (but not the locative and ablative case).

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relationships. The PART-WHOLE schema is transferred to domains such as families, teams, organisations, marriage… The CENTRE-PERIPHERY schema provides us with the difference between important things or matters (central) and secondary matters (peripherial). The SOURCE-PATH schema gives us the understanding of purposes in our daily life as destinations of a journey. The PROXIMITY-DISTANCE determines close and distant relationships and so on (see Johnson, 1987).

Although these image schemas were long considered as belonging to the same level, this notion has more recently been called into question. Authors such as Krzeszowski (1993), Pauwels and Simon-Vandenburgen (1993), and Peña (2002) have tried to reduce Johnson's list of image-schemas either by introducing a plus-minus parameter in the first two cases, or by proposing certain schemas (container, path, control, force) as basic constructs which elicit the instantiation of other subsidiary schemas. Most of these image schemas, metaphors and metonymies operate on the basis of a conventional 'frame' or ICM (Idealised Cognitive Model). For instance, the metonymic mapping between the food eaten and the customer in Lakoff and Johnson's (1980: 35) classic example *The ham sandwich is waiting for his check* works against the background of the conventional restaurant frame or ICM.

Another approach[27] is the theory of 'blending' or 'conceptual integration'. This theory, developed from Fauconnier's early work on 'mental spaces' (1985, 1994) and then in co-operation with Turner (Fauconnier, 1997; Fauconnier and Turner, 1994, 1996, 1998, 2002; Turner and Fauconnier, 1995), aims at modelling the dynamic evolution of speakers' 'on-line' representations. As Fauconnier and Turner (1998) put it "conceptual integration is concerned with on-line dynamical cognitive work people do to construct meaning for local purposes of thought and action". Conceptual integration is a basic mental operation that creates networks of connections between mental spaces. There are four different spaces: two Input Spaces, a Generic Space which contains what the source- and target-domain inputs have in common, and a Blended Space which contains structure from the generic space and typically develops emergent meaning not contained in the inputs.

Conceptual integration shares a number of aspects with the conceptual theory of metaphor (and metonymy) briefly explained above. Grady, Oakley and Coulson (1999: 100) cite the following similarities:

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[27] In recent work on Cognitive Linguistics literature, Lakoff and Johnson's model is labelled 'two-domain approach' because the mappings they propose are only between two conceptual domains. In contrast, Fauconnier and Turner's model is called 'multi-space approach' because, as we will see below, mappings or correspondences take place among multiple, and sometimes several layered, spaces. See Grady, Oakley and Coulson (1999) for a comparative analysis of these two approaches.

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(i)   metaphor is treated as a conceptual phenomenon,
(ii)   there is a systematic projection of language, imagery and inferential structure
         between conceptual domains,
(iii)   there are constraints on how this projection takes place.

Despite their agreement on these issues, these two approaches are different. In a recent paper, Turner and Fauconnier (2002: 470) summarise their differences as follows:

> Contemporary accounts of metaphor and analogy have focused on structure-mapping from a source (or base) onto a target. Such mappings can exploit existing common schematic structure between domains, or project new structure from the source onto the target. The work on conceptual blending has shown that in addition to such mappings, there are dynamic integration processes which build up new "blended" mental spaces. Such spaces develop emergent structure which is elaborated in the on-line construction of meaning and serves as an important locus of cognitive activity

Fauconnier and Turner's theory of blended spaces has shed some light on the study of Basque proverbs. Garai (2000, 2001, 2002) understands proverbs as mental space builders. Based on the occurrences of the conjunction *eta* 'and' in Basque proverbs from the 16th and 19th centuries, this author classifies proverbs into two types. On the one hand, the 'set' type where "a mental space is created by blending either two antithetical elements in order to point toward impossibility in the speaker's reality, or two compatible terms defining the pursuable ideal world". Then, there is the 'explanation' type which

> brings together two quasi-equivalent proverbs, the second part constrains the meaning of the first part, almost like an answer by someone who does not accept the ethical authority of the original proverb.

According to Garai, what we do with a proverb is to open a mental space where the objects mentioned can be categorised at a more general level, and then, we map the relations onto the target context.

Garai and Ibarretxe (2002) have also applied this model to the analysis of the Complete Path construction in Basque. This construction refers to the recurrent tendency to express both the source and goal of movement for the description of translational motion. This construction shows up not only in physical description of motion, e.g. *lehiotik behera* 'from the window to below', but also in a good number of different metaphorical and idiomatic expressions, for instance, *hitzetik hortzera* 'suddenly', *izartik izarrera* 'all day', *okerretik okerrera* 'worse and worse'. Despite the diversity that exists in the semantics of these expressions – some express 'quickness', others 'period of time', and and still others 'manner' – these authors show that these expressions form a coherent, structured and motivated group. By means of Fauconnier and Turner's multi-space model, they explain how the different meanings in

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these expressions are the result of different networks of connections between the elements that form the Input spaces. In other words, the information that we have in the Input and Generic spaces is the same in all these expressions. Input I will contain information about the lexical items that form the linguistic expression, Input II the information provided by the Complete Path construction, and the Generic space the skeletal information about both Input spaces.

Conclusions: An open field for the future…

In this article, I have attempted to summarise the main theoretical and methodological tenets in the framework of Cognitive Linguistics illustrating them with examples taken from Basque. This model takes language as symbolic and cognitive in nature. Human experience is the motivation for what is meaningful in the human mind; thought is not a manipulation of symbols but the application of cognitive processes to conceptual structures. Meaning structures come not only from the direct relationship with the external world but also from the nature of bodily and social experience (how humans interact with the world) and from human capacity to project from some aspects based on this experience to some abstract conceptual structures. This is perhaps one of the achievements of this approach: the fact that imaginative aspects of reason, such as metaphor, metonymy and mental imagery are seen as central to reason, not as extra-linguistic aspects. This allows for the existence of those meanings that do not have real-world reference.

The principles and tools for analysis introduced in this review are by no means exhaustive. Cognitive Linguistics is a heterogeneous approach and as such, there are many other important research areas – language acquisition and learning, translation, typology and lexicalisation, cultural models – and influential approaches under the umbrella of Cognitive Linguistics – 'Cognitive Grammar' (Langacker, 1987, 1991a, b, 2000), 'Construction Grammar' (Fillmore and Kay, 1995; Goldberg, 1995), 'Mental Spaces' (Fauconnier, 1994, 1997), just to name a few that I have not been able to touch on.[28] These areas and approaches are as important and influential as those that we have presented here, however, I have decided not to include them in this discussion for two reasons: (i) space constraints, it would require a much longer article even to provide a brief description of these sub-models, and (ii) possible impact on Basque linguistics, benefits from this model to the general understanding of the Basque language.

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[28] For a very concise general overview of the main research areas and approaches within Cognitive Linguistics see Dirven (2002).

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In my introduction I stated my intention to present a new framework of approaches for the analysis of Basque. Insightful new approaches can offer new insights into even well studied issues in Basque – issues ranging from the etymological origins of the Basque lexicon to the description of its phonological system, from the analysis of Basque conceptual structures to the organisation of its verbal and auxiliary paradigm. Where Cognitive Linguistics appears to be able to make the greatest contribution is in Basque semantics. Not only could it help redress the current imbalance between the number of semantic studies and morpho-syntactic and phonological studies, it could also offer the theoretical apparatus required to transform descriptive semantic analyses of Basque into theoretical semantic studies that would facilitate understanding not only of how 'things' are said in Basque but also the reasons why Basque chooses to say those 'things' in such a specific way.

As regards the array of research on Basque linguistics in the last few decades, there have been numerous studies dealing with its morpho-syntactical and phonological system, either from a theoretical point of view – mainly within the framework of Generative Linguistics (Artiagoitia, 2000; Goenaga, 1980; Ortiz de Urbina 1989) or from a more descriptive standpoint (Euskaltzaindia, 1985; Hualde 1991; Hualde and Ortiz de Urbina, 2003). On the other hand, there have been fewer descriptive works in semantics and fewer still, if any at all, theoretical ones. Basque semantics has been mostly devoted to descriptive studies that focus on lexicographical aspects of the language – an area with long tradition and high quality works (cf. for example the work of Azkue (1905), and more recently Mokoroa (1990), Perurena (1992; 1993), but it has neglected the theoretical aspects of such studies. In my opinion, Cognitive Linguistics can fill that important gap because it is a framework that builds its theoretical and methodological tenets on real data and therefore, it can easily fit in with the current body of semantic research in Basque.

To return to the example used as an illustration for a number theoretical points in this article – *buru* – this word is perhaps one of the richest polysemous nouns in Basque. In order to know the wide array of its usages and meanings we just need to refer to any of the good lexicographic analyses of this word. We will find a detailed list of such meanings with illustrative examples that give a complete description of what this word means in Basque. What these lexicographic analyses do not offer us is an explanation for the reasons why *buru* conveys so many and so different senses and whether there is any structure or any motivation underlying such meanings. Cognitive Linguistics appears to be a highly promising way forward to find such answers.

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In sum, the main goal of this article has been to provide the Basque linguistics community with the basics of a new framework for the study of the Basque language. I hope not only to arouse readers' curiosity regarding Basque linguistics, but to encourage some researchers to apply concepts from the field of Cognitive Linguistics to the study and understanding of both 'classical' and 'unknown' areas of our ancient language.

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