

What words mean and express: semantics and pragmatics of kind terms and verbs

Abstract

For many years, it has been common-ground in semantics and in philosophy of language that semantics is in the business of providing a full explanation about how propositional meanings are obtained. This orthodox picture seems to be in trouble these days, as an increasing number of authors now hold that semantics does not deal with thought-contents. Some of these authors have embraced a “thin meanings” view, according to which lexical meanings are too schematic to enter propositional contents. I will suggest that it is plausible to adopt thin semantics for a class of words. However, I’ll also hold that some classes of words, like kind terms, plausibly have richer lexical meanings, and so that an adequate theory of word meaning may have to combine thin and rich semantics.

1. Introduction

For many years, it has been common-ground in semantics and in philosophy of language that semantics is in the business of providing a full explanation about how truth-conditional meanings are obtained. In this vein, it has been assumed that the goal of the discipline is to provide a description of how lexical meanings combine compositionally to produce a proposition, i.e., a thought content. Perhaps it has not always been put in terms of thoughts, but, as it has also been assumed that propositions are the contents of propositional attitudes, semantics has been assumed to be concerned with explaining how sentences, or sentences in contexts, express thoughts. This orthodox picture seems to be in trouble these days. An increasing number of authors now hold that semantics does not deal with thought-contents. In particular, they hold that the semantic values corresponding to word-types may have the “wrong format” (Recanati, 2004, Carston, 2012, 2013, 2016a) to produce propositional contents. This, in most cases, amounts to saying either that there is a proprietary semantic ontology, i.e. that there is a distinctive realm of meanings, a realm apart from the realm of contents, or that lexical meanings, although drawing from conceptual material, are too schematic to enter propositional contents. In this paper I will be concerned with these two positions, which I will call “thin semantics”. The differences between these two positions are not as important as it might seem: to a large extent, it depends on what we take concepts to be. If, for instance, we assume that concepts are the building blocks of thought-contents,

then the claim that lexical meanings do not stand for pieces that can form part of propositional contents ipso facto entails that lexical meanings are not conceptual¹.

Chomsky's writings against truth-conditional, denotational, semantics have been clearly influential in this general movement away from past orthodoxy (e.g., Chomsky, 2000, Yalcin, 2014, Pietroski, 2005, 2017). However, he has not been the sole influence by any means. The contextualist movement in pragmatics has had a profound impact as well. For instance, Charles Travis' influential attack on truth-conditional semantics has many points in common with Chomsky's, both in terms of the kind of problematic examples he uses and in terms of the general lesson he seems to draw from these examples (Travis, 2008). Carston's (2002) and Recanati's (2004) style of contextualism, on the other hand, has targeted the idea that lexical meanings could be concepts (i.e. the mental representations we use in higher level cognition) and that sentences could encode truth-evaluable compositions of concepts (i.e., psychologically real thoughts). It is also interesting to mention that the distinction between the semantic and the conceptual can be found as well both in work dating from the late eighties/early nineties (Bierwisch and Schreuder, 1992) as well as in recent work in Cognitive Linguistics (Evans, 2009). The idea, in all cases, is that the link between words and concepts is mediated by intermediate representations that, in one way or other, constrain what concepts a word can express.

In this paper, I will present a view according to which propositional contents arise from combinations of rich, structured, concepts, and more schematic meanings. By focusing on kind terms on the one hand and verbs on the other, I will try to show that this general view has some plausibility². I will try to argue that prototypical nouns such as kind terms give access to rich concepts, some kind of structured encyclopedic information,

¹ Recanati (2004) distinguishes two versions of the "wrong format" view. According to the first version, lexical meanings are too schematic and informationally poor to be part of truth-conditional contents. According to the second version, lexical meanings are too rich to be building blocks of propositional contents: propositional contents are composed of only part of the information provided by lexical meanings. I find more appropriate to reserve the label 'wrong format' only for the view which holds that lexical meanings are not conceptual. This view has it that, in effect, word-type meanings come in the "wrong" representational format. In any case, this terminological point is not important, and I will make scarce use of the label "wrong format".

² Cohen (1971) is a clear antecedent of rich lexical semantics: he argues that the meaning of connectives in natural language is far richer than their logical counterparts and that occasional meanings of connectives result from selection of some features and deletion of others. Wierzbicka (1985), on the other hand, can be seen as an antecedent of the view that kind terms have rich meanings (see also, Moerdijk, 2008), and even as an antecedent of the view that verb meanings have a comparatively thinner semantics (Goddard and Wierzbicka, 2016).

which is relevant to construe propositional, truth-evaluable, contents. In contrast, verbs provide just some abstract information that is enriched and specified in context, to a large extent depending on the arguments they take. The meanings of both kinds of terms can be modulated in context (Recanati, 2010), but whereas modulation of kind term meanings typically result in vague and open-ended *ad hoc* concepts (Allot and Textor, 2012), modulation of verb meanings look more like specifications or concretizations.

The structure of the paper is the following. I will begin by presenting reasons that have convinced some that semantics requires its own ontology or representational level, and how these authors account for some of the facts that semantics was assumed to have to explain. In order to keep the discussion focused, I will use some of Robyn Carston's proposals as illustration, given that she is one of the authors who have devoted more work to this issue, beginning with her proposals in Carston (2002). While in Carston (2016b), she advances a rather different account and even criticizes the "thin meanings" approach, her past views are still among the most worked-out proposals in the thin meanings camp. After presenting Carston's past suggestions, I will present some particular facts that thin meaning theories have to explain, and argue that thin semantic meanings find no role to play in the most sensible explanations compatible with the theories. This, I will try to show, should take us towards a different picture, where the lexical meanings of at least some lexical pieces are taken to contain rich conceptual information. However, not all lexical pieces are likely to be as informationally rich as others. Kind or sortal nouns (i.e. nouns which denote kinds, or sortals) are likely to be rich, while, e.g., verbs, are probably sketchier, which eventually means that semantic theory has to combine thin and rich lexical meanings.

2. Semantic underdeterminacy

One powerful source of discomfort with traditional truth-conditional semantics is the generalization of the phenomenon known as "semantic underdeterminacy" (Carston, 2002), which consists in the claim that the semantic information encoded by a sentence underdetermines its propositional meaning. Carston and other pragmaticians show that even very simple sentences can express different propositions in different contexts after their eventual indexical constituents have been fixed. Propositions, on this account, are psychologically realistic thoughts, i.e., truth-evaluable compositions of concepts/mental representations, but their view generalizes to any other account of propositional

contents. In general: sentences fall short of having, or carrying, propositional contents, because variations in the context of utterance of a sentence generate variations in its truth-evaluations. To this, it has to be added that we are not justified in identifying any of these possible propositional contents as *the* proposition expressed by the sentence. That is, all, or at least, many, of the propositions that the sentence can be used to express are on equal footing in this respect.

According to Carston and many others, the reason why sentences do not have propositional contents is that some of their constituting parts (words) do not have determinate, stable, contents which can form part of propositions. Many examples illustrate this: putting it now in terms of denotations, the genitive in ‘John’s car is fast’ can stand for the relation *property of*, as well as the relation *being driven by*, the relation *having bet on*, etc. In ‘the leaves are green’ (Travis, 1996), it is customarily said that ‘green’ can stand for a certain color that the leaves possess or a certain color that they display. And as stressed by Chomsky (2000), even proper names lack a fixed denotation: ‘London’ can stand for a determinate geographical place, its inhabitants, its Council, etc. Lacking a stable denotation is not something that affects some particular class of words: it is a rampant phenomenon. So it can be said that, on the face of it, word-types do not contribute contents/denotations to sentence meanings. If, instead of talking about denotations, we talk about concepts-as-mental particulars, the upshot we get is that, apparently, word-types do not contribute concepts to sentence meanings. In other words, the *standing* or *lexical* meaning of a word cannot be a concept.

Now, if all this is granted, then it seems that if there is something that can be called *lexical meaning*, it has to contain some distinctive, proprietary, information. This is what makes Carston suggest that that the linguistic meaning of sentence constituents may rather consist in pointers to conceptual space (Carston, 2002), that the semantic information attached to lexical entries is very close to syntactic information (Carston, 2008), or that the meaning of words may be too schematic to be conceptual (Carston, 2012)³. Note, however, that Carston has never fully endorsed any of these ideas.

Rather, she has considered them working hypotheses, along with the hypothesis that word-meanings might be too rich in information to enter into propositional compounds

³ The idea that lexical meaning can be pointers to conceptual space is open to different interpretations, some of which are compatible with the view I want to defend. I propose to focus instead on Carston’s more recent proposals, which make clear that words encode schematic, or underspecific, information.

(Carston, 2012)⁴. The general idea behind her proposal and other proposals by other authors is that semantic representations somehow only constrain what range of concepts a word can express. Thus, according to Travis, “[w]hat words mean plays a role in fixing when they would be true; but not an exhaustive one.” (Travis, 1996: 451). And in Bierwisch and Schreuder’s (1992) two-level semantics, the semantics of a word provides necessary conditions on its conceptual meaning, which is typically richer than its properly semantic meaning. Throughout the paper, I will take it that a *thin meanings* theory holds (a) that lexical meanings constrain the uses of a word, and (b) that they do it by encoding certain schematic meaning which applies to all, or at least most, of the correct uses of the word (for other proposals along these lines, and from different fields, see Ruhl, 1989, Klepousniotou et al., 2008, Frisson, 2009, 2015).

3. Regular polysemy

The main first worry about the accounts which posit properly semantic representations (or, in general, which make lexical meanings schematic or “thin”) is that they do not have good explanations which make use of the posits of the theory for a lot of systematic patterns in linguistic understanding. Let me begin by introducing regular polysemy, before discussing how a model of thin semantics can deal with it, and comparing it with a “rich semantics” model.

Apresjan (1974: 16) defined the polysemy of a word *a* with the senses A_i and A_j as *regular* if there exists at least one word *b* with the polysemous senses B_i and B_j , being semantically distinguished in exactly the same way as A_i and A_j , and *irregular* if the semantic distinction between A_i and A_j is not exhibited by any other word in the language. The notion of regular polysemy is exemplified by polysemy patterns such as: author-for-works of author, container-for-content, animal-for-meat-of-animal, place-for-institution, etc. These are all productive and regular patterns, and most of them can be

⁴ Although she is quite explicit in Carston (2013, 200): “Each word comes with its own distinct but schematic meaning, which functions as a constraint on the general pragmatic process of accessing or constructing a concept, a process which is wholly motivated by the goal of the pragmatic system which is to deliver speaker meaning.” See also Carston (2013; 203): [...] an account of word meanings as non-conceptual (semantically underspecified) would be the completing component of this view of the relation between language and thought: not only do sentence meanings underdetermine thought, but the basic constituents of sentences (words) underdetermine the basic constituents of thoughts (concepts). If this account turns out to be right, it’s not just that we don’t always say what we intend our hearers to take us to mean but that it is simply not possible to say what we mean”.

found in many languages of the world (Srinivasan and Rabagliati, 2015). One typical way of dealing with these cases is by postulating different representations stored either in two separate lexical entries or within a single lexical entry (sense-enumeration lexicons) (Foraker and Murphy, 2012); another is to postulate a core common meaning (Klepousniotou, et al., 2008, Frisson, 2009, 2015); and yet another is to posit richer conceptual representations (Pustejovsky, 1995).

While it is customary that the coordination of two different senses of a polysemous term gives rise to *zeugma* (such as in ‘Arthur and his driving license expired today’), many regular polysemies pass anaphoric binding and co-predication tests⁵:

- (1) Give me that book you found so entertaining, and put it on the top shelf;
- (2) Lunch was delicious but took forever;
- (3) London is big but boring;
- (4) That rabbit you see running over there will be delicious.

Now, what can the kind of thin semantics we are considering say about regular polysemy? Can it explain why certain words enter into certain patterns of meaning variations? Can it explain why there can be cross-reference between the different senses of a polyseme?

In principle, a thin semantics account such as the one suggested by Carston has to deal with polysemy in the same way that it deals with more obvious *ad hoc* concept construction, i.e., with an explanation along the following lines: we access an underspecific, schematic, representation. This representation puts some constraints on what concept the word can stand for, and provides some instructions about where to look within our conceptual structures. Relevance applied to the selected region of conceptual space will give us the intended sense of the polyseme, with the result that we “home in” on some particular sense (see Frisson, 2009). In sum, in this account, particular senses would be *ad hoc* concepts, and so the rabbit-meat sense in, e.g., ‘he

⁵ Pustejovsky (1995) distinguishes between “inherent” and “regular” polysemy. Inherent polysemy is a subclass of regular polysemy. Its main characteristic is that the senses of the polyseme belong to different types. The distinction is not important for our present purposes, though it must be noted that, typically, inherent polysemies pass co-predication tests easily, while merely regular polysemies need a lot more contextual support.

was eating rabbit’ would be the *ad hoc* concept RABBIT*. We would reach this *ad hoc* concept by inferential pragmatic processes⁶. Now, if this were all the theory had to say, it would be blurring an important distinction and would be unable to explain the co-predication data. The ‘rabbit’ case would be dealt with like typical *ad hoc* concepts such as ANGEL* in ‘Sally is an angel’ (see fn. 6), while they seem to require different explanations and have different behaviors. In fact, the differences between the ‘angel’ and the ‘rabbit’ case are so substantial that no theory should treat them as the same phenomenon. Besides the data about cross-reference, here are some other relevant differences between senses of regular polysemes and *ad hoc* concepts: (i) the different senses of a polyseme prime each other, while it is doubtful that the use of ‘flat’ in ‘the sea is flat’ primes FLAT*, with FLAT* being the concept expressed by ‘flat’ in ‘the Tour de France third stage is flat’; (ii) there seems to be an essential difference between truly *ad hoc* concepts and senses of a polyseme: the typical *ad hoc* concepts (ANGEL*, FLAT*) are somewhat vaporous, hard to define or pin down or open-ended (Allott & Textor, 2012), while senses have clear references; (iii) polysemy resolution is usually presented as a process of selection, while *ad hoc* concept formation *prima facie* implies constructing one meaning on the fly: contextual information is relevant in both cases, but it seems that in different ways, because in one case contextual information is relevant in order to pick out an already existing sense, while in the other it is relevant in order to construct a meaning; (iv) finally, and above all: the systematicity of regular polysemy requires a specific explanation.

Now, note that, although the account is not bound to hold that there is no difference between the two cases, it is difficult to produce an explanation of the difference between

⁶ The adoption of a thin meaning semantics in Relevance Theory has some implications with respect to *ad hoc* concepts: according to “standard” Relevance Theory words encode atomic concepts, which give access to encyclopedic entries. Hearers reach the thought expressed by the speaker by accessing encyclopedic knowledge and gathering from it what is needed in order to adjust explicatures (what is said) and implicatures. Thus, to get the thought expressed by ‘she an angel’ as a response to ‘can Sally take care of the kids?’, the hearer had to look up in the encyclopedic entry associated to ‘angel’, and gather from it the relevant knowledge (that angels are good, that they like kids, or whatever) required to construe an *ad hoc* concept ANGEL* that would help warrant the implicatures (that Sally can indeed take care of the kids). This *ad hoc* concept would thereby form part of the explicature. According to this view, the outcome of *ad hoc* concept construction is typically explained in terms of a change in the extension of the encoded concept, either a narrowing or a widening: Wilson & Carston, 2007. However, according to the thin semantics proposal, *ad hoc* concept construction cannot be described in terms of extensions: “The approach has consequences for (relevance-theoretic) pragmatics, in that we can no longer think in terms of the narrowing or broadening of denotations (or of concept adjustment) as there is no linguistically-specified denotation to narrow or broaden (and no concept to adjust). All concepts occurring in communicated thoughts (explicatures) are pragmatically inferred and merely constrained by an encoded lexical schema/template or an array of activated encyclopaedic information” (2012; 13).

regular polysemy and *ad hoc* concept formation where schematic meanings play a role. For instance, it could be said that the peculiarities of regular polysemy depend only on how our conceptual space is structured. It may well be a fact of our cognition that thinking about an animal such as a rabbit makes us think about its meat; that thinking about a container (a bottle) makes us think about its content; that thinking about a certain physical object (DVD) makes us think about the information it stores, etc. That is, perhaps the activation of one of the senses of a regular polyseme spreads to the other(s) in a specially fast and stable way, such that we experience no problem in switching from one sense to the other, whereas the process of forming an *ad hoc* concept involves more effortful pragmatic reasoning. Such an explanation could perhaps also explain the co-predication data: if two senses are linked by a pattern of strong co-activation, then both can be available for predication and anaphoric reference, even when the speaker switches from one to the other. As I say, an explanation along these lines could well begin to explain the peculiarities of regular polysemy, as well as to account for the differences between regular polysemy and *ad hoc* concept construction. However, note that such an account only makes use of cognitive features such as co-activation patterns between certain senses. Thin semantic knowledge plays no role in the explanation. That is, the theory does not make use of its posits.

A second problem for the thin semanticist related to regular polysemy stems from the idea that semantic representations encode some general, or schematic meaning which applies to all the uses of a certain word. Theorists such as Klepousniotou and Frisson have applied this idea to the study of polysemy, such that, according to them, there are abstract or schematic meanings which can cover all the senses of a polysemous expression. Yet, as Foraker and Murphy (2012), claim, it is really difficult to find anything in common between the *building* and the *institution* sense of ‘school’. That is, it is doubtful that some schematic meaning could apply to the different senses of these regular polysemes. To say that in polysemy senses are related is not to say that there is a number of features, or whatever, that all senses share⁷.

⁷ This kind of explanation may account for polysemies generated by metaphorical chains, where it is expected that all the different senses of the polyseme are related *by virtue of sharing some features*. Regular polysemies, however, are typically non-metaphorical. One might object that it is possible to come up with a representation that encompasses all the senses of, e.g. ‘school’ (building, institution, people running the institution, process, etc.), namely, *building where kids learn basic things and socialize, forms part of an institution, is run by a director named by a body of teachers and parents, etc.* However, it is obvious that this is not a thin meaning anymore.

In sum: regular polysemy presents a problem to the thin meaning theorist. On the one hand, thin meanings seem to play no role in the explanation of regular polysemy, which is an explanandum of any semantic theory. On the other, it is unlikely that we can find or construe an abstract representation which encompasses all the different senses of a regular polyseme (see also Falkum and Vicente, 2015; Vicente, 2017).

Before I move on to discuss other systematic variations, different from regular polysemy, I want to introduce the alternative picture which I regard as more reasonable. I want to claim that the meaning of a word-type (i.e. its lexical meaning) is that conceptual material that the word activates regularly. Moreover, I want to call that ‘a concept’, following Vicente and Martínez-Manrique (2016). In psychology, a concept is a body of information or a knowledge structure that is used in categorization, inference and other higher level cognitive processes (Machery, 2009). According to Vicente and Martínez Manrique (2016), a plausible way to decide what belongs and what does not belong to a concept is by looking at what kind of information is co-activated in a stable and functional way. So the view is that the lexical meaning of a word is a package of conceptual information, tied together by co-activation patterns, that the word activates in a stable way. However, the semantic value of a word-token, i.e., what it contributes to a particular truth-conditional content, or thought, is not its entire lexical meaning. In the case of kind nouns at least, lexical meanings are rich conceptual structures, and what goes into contents is thinner than that. What I want to claim is that kind nouns typically contribute only parts or aspects of their lexical meaning to utterance meanings. This means that there is a point of agreement with “thin semanticists”, which is that words do not contribute their lexical meaning to truth-conditional contents. However, the reason why I would defend that the lexical meanings of kind nouns do not get into propositional contents is that propositional contents are typically formed of selections of noun lexical meanings. Let me try to explain this point.

One influential approach towards regular polysemy, and in particular towards the so-called “inherent” (Pustejovsky, 1995) or “logical” (Asher, 2011) polysemy –the one that passes co-predication tests- is to construe the lexical meanings of regular polysems as compounds of two or more senses or aspects, which are called ‘dot objects’. Thus, the lexical meaning of, e.g., ‘book’ is said to consist in part of the conjunction of two aspects: the-book-as-a-physical-object, and the-book-as-a-content, forming the dot object “physical object•information”. The word-type ‘book’ activates both aspects of

the dot object, but in some cases only one of them will be selected: in ‘the book’ is heavy, the aspect that is selected is the “physical object” aspect; in ‘the book is interesting’, the selected aspect is “information”; and in ‘the book is heavy but interesting’, ‘book’ contributes both aspects and thus the whole “dot object”.

This way of dealing with regular polysemy is congenial to the “rich meanings” approach. It exemplifies a way to explain regular polysemy that appeals to complex conceptual structures that offer different denotational possibilities. The dot-object approach, however, has some shortcomings: on the one hand, it lacks explanatory power, since dot objects are postulated just to account for co-predication patterns. On the other hand, it is committed to claiming that the NPs of co-predication sentences stand for what seem to be gerrymandered entities: think of a sentence such as ‘Brazil is a large Portuguese-speaking republic that has deep problems associated with inequality and won five World Championships’, where ‘Brazil’ would stand for an entity formed by a geographical area, a group of people, a political institution, an economic system, and a football team. Some formal ontologists (Arapinis, 2013, Arapinis and Vieu, 2015) try to defend that we can indeed conceive of that kind of entity as a proper thing in the world (in the way that we can conceive of a body and a person as a proper thing in the world, i.e. a human being). However, for one thing, the persistence conditions of these alleged entities are far from clear⁸.

Here I want to just give a broad idea of another way of explaining regular polysemy that does not commit to dot objects but also makes use of the idea that senses are parts or aspects of whole concepts. If we think about concepts as, roughly, structured encyclopedic information, we can think about the aspects that allegedly constitute dot objects as specially relevant and accessible features of a concept, not as possible

⁸ If we say (Chomsky, 2000): *London is so unhappy, ugly, and polluted that it should be destroyed and rebuilt 100 miles away*, it seems that we are claiming that the alleged whole would survive even if only one of its parts (its reconstructed buildings and streets) would survive (nowhere is it said that inhabitants and councils are moved 100 miles away). However, it seems that the alleged whole should not exist when only one of its constitutive parts persist: if we say that a human being is constituted by body and mind, then the human being goes out of existence if either part does. On the other hand, if, in the Chomskyan situation, all Londoners and the London institutions go on exile and decide not to move to the new location, we can also say that London is wherever the Londoners and the institutions are. So, if London could persist with the persistence of any of its parts, and parts can persist independently from each other, then we have too many Londons.

conceptualizations of a complex entity. Let me illustrate this idea by looking into a possible representation of the SCHOOL concept (for the polysemy of ‘school’, see Frisson, 2009).

The concept of school can be thought as a structure that encodes the following information:

SCHOOL:

Kind: Social institution

-*Telos*: for learning, socialization, and enculturation of young people.

- Temporal realization [associated to the *telos* of the institution]: a process of x years of learning, socialization and enculturation.

- Occupants [associated to the *telos* of the institution]: kids and teachers

-*Physical realization* [institutions have to be physically realized]: building.

-*Social realization* [institutions have to be organized in some way]: director and staff.

-*Representation* [institutions are represented in society at large in several ways]: football team, basketball team, head of the institution, an elected representation of the kids...

This is of course just a rough sketch of what the lexical meaning of *school* can be like and how conceptual knowledge can be represented. Let me explain a bit this sketchy representation. The concept of school is labeled, or tagged, as *social institution*. A good part of what we find into the concept/lexical meaning of ‘school’ derives from such a labeling or tagging and an inheritance system (Pustejovsky, 1995) or semantic network that puts concepts in relation with its superordinates such that subordinate concepts non-monotonically inherit information from their superordinates. If something is a social institution then, unless some information stored in the concept contradicts it, it will have a function (a *telos*), a physical realization, a social realization, and ways of being represented. In the Pustejovskyan scheme, the *qualia* structure also works this way: if a concept is an artifact concept, it will have a function (a telic *quale*); if it is a natural kind concept, it will not, etc.

Given that school is a social institution, its *telos* specifies its essence. A way of thinking about the whole concept/lexical meaning of *school* is as a theory-like structure whose features are explanatorily related to its essence (see Weiskopf, 2011, for an excellent

introduction to theory-like concepts). From the particular essence attributed to school (that it is for educating young people) follows the idiosyncratic knowledge that schooling takes some time, which can be thought of as a process (relevant for understanding expressions such as *I went to school*; meaning: I completed the process of schooling: contrast with *I went to church*), and that schools have kids as occupants, as well as the particular physical realization, social realization and the ways in which the school can be represented. These features are explained by the essence of school, but are not necessitated by it, so they do not provide, all together, a definition of the SCHOOL concept.

I don't want to hold that the SCHOOL concept is just this theory-like structure. The concept has to also contain prototypical information, as well as information about ideals (see below). Perhaps this kind of information can be incorporated within the theory-like structure that I present (see Hampton, et al. 2009, Bloch-Mullins, 2017, for proposals along these lines). At this point, I only aim at providing a possible explanation about a certain kind of polysemy of 'school' (the polysemy that affects the word in virtue of being about a social institution). The basic idea is that all the nodes in the structure refer to salient features of the concept, given our experience with schools in particular, and with this kind of social institutions in general. So they are all active when we think about schools in any of its different senses: this is the main reason why a speaker would use the word *school* to refer to any of these parts and why the hearer will easily understand her. (For empirical results, see Frisson, 2009, Klepousniotou et al. 2008, 2012).

A structure like the one sketched above offers denotational possibilities, i.e., a variety of possible occurrent denotations from which the speaker has to select. However, these "denotational possibilities" are all stored in the lexical entry. That is, the denotation potential of a word-type is not explained in terms other than the information stored in the meaning of such a word-type. In this view, thus, a word is associated with a number of denotations, and a sentence with a number of contents that determine different truth-conditions. Usually, the number of contents that a sentence can have will appear to be smaller than the number of denotational possibilities associated to a single word, given that much of the selection of denotations is supposed to be intra-linguistic: in *I have talked to the school*, as *talk* has selectional restrictions for animacy in both of its arguments, there are some denotations of *school* that are ruled out. However, this point

is not obvious. Some authors prefer to talk about selectional preferences instead of selectional restrictions (Zarcone, 2014), given that contexts can be concocted where the alleged selectional restrictions are violated.

I don't have the space to explain co-predication in detail, but it makes sense to think that all the senses in the structure above form an activation package, such that senses in the package co-activate each other in a way that none of them activate any other piece outside the package⁹. This kind of strong co-activation within a group of senses would explain why they are always available both for co-predication and for anaphoric binding. Unless the context is very strongly biased for one of the senses, they all remain active. It is plausible to think that these packages of strong co-activation are typically formed by senses whose denotations are linked by the sort of relations that Arapinis (2013) proposes, i.e. spatiotemporal coincidences explained by dependency relations (such as realization), or by a representation relation. That is, it is plausible that parts of concepts whose denotations have some especially intimate relationship, such as stable and explainable co-locations, tend to receive a stronger synchronous activation. This would explain why they are always "there", all active as long as one of them receives activation, such that one can easily target each of them for predication and anaphora.

This general approach can be applied to deal with other now classical problematic cases for truth-conditional semantics, such as Chomsky's 'London' case. 'London' is a polysemous term which, like 'school', also has a big number of senses. It can be said that the lexical meaning of 'London' is a rich concept which stores information about London's being a big area, its being the place where political decisions are taken, its hosting inhabitants, its occupying a particular geographical location, etc. Depending on which part, or aspect, of this information we focus on, we get one reading or another: if we focus on their inhabitants, we can say things like 'London is friendly'; if we focus on the political aspect, we get things like 'London conspired against Scotland's independence', etc. However, we can also exploit the fact that all these senses form co-activation patterns to form co-predication structures.

The contrast between this kind of explanation and the thin semantics view can be put in the following terms: in his defense of an underspecification approach to polysemy,

⁹ This is in line with empirical results that show that the more distantly related the senses are, the more they behave as homonymous meanings, competing for activation (Klepousniotou et al, 2012).

Frisson (2009, 2015) lumps together views such as Blutner's (1998) or Carston's (2012) suggestions, and the Pustejovskyan *qualia* theory, where common nouns are associated with at least four types of information about the objects they refer to: origins, constitution, telicity, and the location of the kind in the hierarchy of kinds. The idea is that a representation can be underspecific either because it is minimal or because it stores too much information. Carston's underspecific representations are minimal; but Pustejovsky's lexical entries of nouns are underspecific because they basically consist in options which can be selected (Frisson, 2009). The lexical entry does not specify a content; rather it offers the linguistic processor possible contents. Thus, the lexical meaning of 'school' does not specify any particular content or value; rather, it offers several possibilities: school-as-institution, school-as-building, etc. I think that underspecific *rich* representations can better account for many of those problematic cases that have moved many to postulate *minimal* underspecific representations.

4. Other systematic alternations

There are more systematic truth-conditional variations than the variations introduced by the regular polysemy we have been looking at. In this section, I want to briefly discuss two of them, and will try to suggest that the explanation of systematic truth conditional variations in general do not require semantic, constraining, representations. What I regard as most original in this section is the hypothesis that at least some of the so-called "Travis cases" exemplify a systematic kind of truth-conditional variation (due to some subtle kind of noun-polysemy). This, I think, is particularly important, because one of the main reasons for postulating thin lexical meanings is Travis' kind of "occasionalism" (Travis, 2008). If the best known examples which motivate the hypothesis that meanings constrain contributions to propositional contents turn out to belong to systematic patterns, accountable for by appealing only to conceptual structure, it seems that a good part of the momentum for thin semantics is lost.

The first systematic kind of truth-conditional alternation I want to mention is that between different conceptual structures. It has gone unnoticed until very recently that some common nouns alternate in what they contribute to truth-conditions between theories and prototypes. Machery and Seppälä (2011) tried with a number of sentences, and got the result that competent speakers gave "in a sense yes, in a sense, no" responses to the question of whether such sentences were true or false. Some of their

examples are ‘Tina Turner is a grandmother’, ‘tomatoes are vegetables’, ‘whales are fish’ and ‘chess is a sport’. The idea here is that speakers consider that these sentences are true when they think about grandmothers, vegetables, fish and sport in a certain way, and they consider that the sentences are false when they think about those things in a different way¹⁰.

Machery and Seppälä hold that these common nouns are polysemous, so that what these common nouns contribute with to truth-conditional contents alternate between different conceptual structures. Their idea is that these different conceptual structures (prototypes and theories) are stored separately and can be independently activated. I have argued instead that it is more plausible to think that they form part of a unique hybrid conceptual representation (hybrid because it hosts different conceptual organizations). This hybrid representation is likely the lexical meaning of the common noun, it is stably activated by the word-representation, and its different meaning-contributions are explained as selections of one conceptual organization instead of another.

It has been traditional to explain alternations between theories and prototypes as coercions. For instance, it has been said that in ‘he is very German’ the individual-level predicate GERMAN (in our terms, the theory), is coerced into the prototype of Germanhood, a stage-level concept, as a result of a mismatch between the demands of the intensifier and the content of the word (Fernald, 1999). However, there is no coercion in cases like the ones studied by Machery and Seppälä, which may indicate that perhaps in these other cases we also have, instead of coercion, that a particular conceptual organization is selected. That is, whereas the bare copula (in most occasions) would select the theory, the intensifier, the comparative, the progressive, etc., would select the prototype. Be that as it may, it seems that at least some common nouns can contribute to truth-conditional contents with different conceptual structures in different occasions. However, this fact can be entirely explained by appealing to how the conceptual material is organized. We can flip from theories to prototypes and back not because both kinds of structures are accessed from semantic representations, but,

¹⁰ In a related study, Knobe et al. (2013), use words like *scientist* or *friend* to show that there are two different rules of application related to two different senses of these words. If asked whether some non-academic who is very inquisitive and methodical is a scientist, subjects also tend to respond “in a sense, yes/ in a sense, no”. It seems that some words fall under regular patterns of sense alternation which could be described as definition/prototype (Machery and Seppälä, 2011), and concrete features/abstract ideal (Knobe et al., 2013).

plausibly, because they are co-activated by word forms directly (or because each activates the other).

Let me now turn to Travis cases. As said above, Travis' examples have convinced many that meaning (i.e. semantic representations) has to be distinguished from content.

Examples such as the “green leaves” and the “round ball” cases ¹¹, allegedly show that the content of a certain expression can vary from occasion to occasion, even though its meaning is kept fixed (or so Travis assumes). The view I want to present, in contrast, has it that Travis' famous examples belong to a generalization, and that they can be explained by appealing to the different ways we have of conceptualizing objects which belong to kinds ¹².

First of all, the sentences ‘those leaves are green’, and ‘that ball is round’ exemplify a truth-conditional ambiguity similar to the one exemplified by very many other sentences: for instance, ‘this car is fast’ (fast in some period including now/intrinsically fast), ‘this guy is attractive’ (attractive in some period including now/intrinsically attractive), or ‘that guy is dangerous’ (dangerous in some period including now/intrinsically dangerous) ¹³ have the same two different readings that Travis notices for ‘these leaves are green’ (green in some period including now /intrinsically green), and ‘the ball is round’ (round in some period including now /intrinsically round).

What these cases have in common is the following. We can think about guys, cars, leaves, etc. in terms of how they look or in terms of their essential make-up. Depending

¹¹ In the *green leaves* case, we are asked to consider two different occasions where the expression type ‘the leaves are green’ is uttered by someone called ‘Pia’. In the first occasion, Pia is talking to a photographer who needs some green leaves for her picture. Pia has decided to paint green some russet maple leaves. Still, in that context, her utterance of ‘the leaves are green’ is judged to be true. However, then comes along a botanist looking for green leaves. Referring to the very same leaves, Pia says again: “the leaves are green”. This time her utterance is judged to be false. Nothing has changed either regarding the leaves or in the meaning of the utterance, and yet, what was true then is now false. In the *round ball* case, we are required to consider a ball hitting a wall: the ball is round, in one sense, but it is not round – rather, it is oval-shaped- if we focus on the shape it is right when it is in contact with the wall.

¹² See Vicente (2012, 2015) for full development. Note that this explanation applies to only some Travis cases, the most discussed ones. I do not attempt to explain here other cases, such as those that have to do with how color predicates apply to different parts of objects (‘green apple’ vs ‘green watermelon’). These other cases fall under different patterns. Del Pinal (ms.) tries to explain them by appealing to a Pustejovskian constitutive qualia. McNally and Boleda (forth.) provide an interesting model of more detailed mechanisms of composition.

¹³ Imagine the following dialogue: “This guy is dangerous”; “No, he’s not. He was made dangerous”; “Right, so he’s dangerous. In this world he is”. The second speaker denies that the guy is intrinsically dangerous, while the first speaker holds that his character exhibits that property. The distinction is not a stage-level/individual-level distinction, as the guy in question may have been dangerous more time during his life-span than non-dangerous.

on how we think about an object O which belongs to a kind K , whether in terms of how it looks or in terms of its essential make-up, sentences of the form ‘Det K is P ’ become true or false. If talk about aspects is allowed, we can say that there are two different aspects that ‘Det K ’ can contribute to truth-conditional contents: O -as-it-is, and O -as-it-looks. Depending on which aspect of O we focus on, we get the two different readings put forward by Travis in at least the leaves and the ball case.

This is related to our having theory-like conceptual structures, and to our mastering the *is/appears* distinction. The theory associated to a certain category consists in an explanation of some features that individuals falling within that category have in terms of other features that are believed to constitute their essence. However, we know that we can change some of the superficial features of individuals without intervening in their essence (that is, without making them be some other thing). Developing theories for categories and developing this kind of knowledge go hand in hand, and it is described as acquiring the essentialist stance (Gelman, 2003). Now, if we have theories on the hand, and this kind of knowledge on the other, then, there are two possible ways to have a certain feature: intrinsically, as we may put it, or, just currently, or apparently. Put in other terms: if a certain determinable property, for instance, a color, is linked to the essence of an object of a certain kind (it is part of its essential make-up), the object can have the determinate of that property (e.g. be red) which corresponds to its essential make up, or it can have another determinate of that property, in which case we would have that only the object-as-it-looks has that property (i.e., the object, taken in its essential make up, does not have the property, even though the object, seen in terms of its current look, does have the property).

So the following generalization seems to hold: If we have an object (or entity) O of kind K , and a property P which is causally linked to the essence of O , then ‘Det K is P ’ is ambiguous. ‘Det K is P ’ may express the thought that O is intrinsically P or that O is only currently P . Note that for the ambiguity to be there, the property denoted by ‘ P ’ must be a property causally connected (or believed to be causally connected) with the believed essence of O . Otherwise, the ambiguity is impossible: if I cut a long rope short, I cannot go on claiming that the rope is long, whereas if I cut a long story short, I can keep saying that the story is long.

The point, in any case, is that Travis cases such as the much debated “green leaves” case –as well as others, such as the “round ball” case-, exemplify this kind of ambiguity. The ultimate explanation, hence, lies in the organization of our conceptual knowledge and of our cognitive structure more generally; in particular, the explanation involves as ingredients our having theory-like conceptual organizations and our being able to think about objects alternatively in terms of their appearance and in terms of their essential make-up. In sum: the different truth-conditions of ‘the leaves are green’ are not due to the interplay between meaning and occasion; they are due to our being able to think about objects and their relation to properties in two different ways. As in the case of regular polysemy, semantic/conceptual knowledge offers different ways of construing propositional contents. The role of the pragmatic system is to select a particular construction.

5. What words can be made to mean

The view I have presented holds that word-representations of some nouns activate in a stable way a certain conceptual structure rich in information. This conceptual structure is the lexical meaning of the word. Most, if not all, uses of a noun draw from its lexical meaning. However, not all uses of a word can be treated equally. Thus, ‘angel’ in the *she’s an angel* example in section 2, draws its content from the lexical meaning of the word-type ‘angel’. However, this case is not like the regular polysemy case: the content ANGEL* is, probably rightly characterized as a modulated or strictly *ad hoc* concept¹⁴. Cruse (2004) distinguishes between concept-modulation and polysemy, his notion of polysemy including the highlighting of aspects (in the way I have suggested we can highlight either the as-it-is or the as-it-looks aspects of an object). The difference, I believe, lies in that in regular polysemy we just grab from what is there, while in cases like the ‘angel’ case we construe a new conceptual representation. We do use elements present in the lexical meaning of the word, but the output differs from the input in that it behaves as a new category representation. Barsalou (1983) has shown that *ad hoc* categories –which are not exactly the *ad hoc* concepts Relevance Theory talks about¹⁵-

¹⁴ It is always difficult to decide when an alleged *ad hoc* concept is really *ad hoc* or rather a conventional, metaphor-based, alternative meaning/sense of a word. I lack the space to discuss metaphor-based irregular polysemies here. Let me just note that it is not important for the overall picture whether or not the example of *angel* is a good example of an *ad hoc* concept.

¹⁵ Barsalou-concepts are working memory representations of *ad hoc* categories, i.e., categories which are created on the fly, like the categories *THINGS TO TAKE TO A CAMPSITE*, *THINGS THAT CAN KEEP A DOOR OPEN*, etc. The format of their representation is definitional with prototypicality effects. Carston’s properly *ad*

give rise to typicality effects. An *ad hoc* concept such as ANGEL* shows typicality effects not inherited from the features extracted from the lexical meaning of ‘angel’. It is quite plausible that this kind of concepts show many other of the characteristics that more entrenched concepts have.

However, what is interesting is that, again, there seems to be no role for strictly semantic representations to play in the story of how we may construe *ad hoc* concepts or modulate the concepts that we have, at least in the case of some common nouns. *Ad hoc* concept-construction, at least in many cases, consists in focusing on some features of a stored concept and suppressing and/or adding others. Once this is done, a new category representation is generated, which acquires the typical properties that concepts have.

Here I will focus on suppression, which seems to have been relatively more studied than addition. However, there seems to be no reason to think that feature-addition would involve mechanisms different from those involved in feature-suppression. Feature-suppression is guided either by compositional or by pragmatic demands imposed by the understanding of implicatures (see below). What I mean is that feature-addition is reasonably constrained by the same two mechanisms. There is ample evidence that, e.g., in metaphor comprehension there is suppression of features (e.g., Rubio-Fernández, 2007). It is also possible that we suppress features of concepts when figuring out the meaning of adjective+noun constructions such as ‘stone lion’ (Hogeweg, 2012). It should not be surprising, then, if we find out that in *ad hoc* concept construction we suppress features contained in the lexical meaning of the word that has been used to mean what it does not usually mean¹⁶. Now, if this is what happens, we can say that the process is not constrained by the strictly semantic information that thin meaning approaches postulate. That is, we do not need a thin semantic representation to tell us how far we can depart from the alleged lexical meaning. In these cases, i.e., cases of *ad*

hoc concepts probably have a different texture –they are more vaporous and/or open-ended, and it is not easy to specify what categories they pick out (see Allott and Textor, 2012) -. They are not lexicalized, but it seems that, in general, they cannot be captured by linguistic means, while there is apparently no problem in characterizing linguistically a Barsalou-*ad hoc* category. Last: in *ad hoc* concept construction, it seems that one creates a concept, whereas in Barsalou’s case what you create is a category.

¹⁶ According to the view we have sketched above, lexical meanings could well include several different conceptual organizations (prototypes, exemplars, theories, etc.). Some *ad hoc* concepts could result from the suppression of features of a prototype (e.g., JAIL* in ‘my job is a jail’); others from the suppression of some of the features of an exemplar (HEXAGON* in ‘France is a hexagon’), etc.

hoc concept construction, like the ‘angel’ case, it seems that is enough to have pragmatic-implicatural constraints. In the dialogue ‘can Sally take care of the kids?’, ‘Sally? She’s an angel’, the hearer grasps that the concept expressed is ANGEL* because she looks for a response to her question. The actual response has an implicated content: yes, Sally can take care of the kids; and provides a justification: Sally is the kind of person that loves kids and kids love to be with. So it seems that in order to access the *ad hoc* concept, the hearer has to be able to simply grasp what the response implicates. She can do this based on what she knows about angels and on what she takes her interlocutor to try to convey.

In cases where implicatures are not playing this role, selection and suppression of features are guided by different mechanisms. As Hogeweg (2012) shows, if we have rich meanings, we can explain problematic cases, such as the *stone lion* case, in a straightforward and systematic way. Hogeweg proposes that there are three general principles whose interaction determines the interpretation of the noun. These principles are: Faith (features of the input must be present in the output), Fit (interpretations should not conflict with the –linguistic- context), and Non-Vacuity (all lexical entries in the input must at least contribute one feature to the output). The interaction of these principles gives as a result the suppression of some features associated with ‘lion’ (features that belong to the lexical meaning of ‘lion’) and the preservation of others. The status of these principles may be debatable: are they semantic or pragmatic, albeit non-implicatural? However, what seems clear is that their input is rich conceptual structures, which Hogeweg also identifies with lexical meanings, and that the explanation does not resort to any other kind of representation.

Thus, the idea that many new concepts can be accounted for basically in terms of feature suppression, is very congenial to the account that lexical meanings are rich in conceptual knowledge. In some cases, suppression is guided by clearly pragmatic constraints (implicatures); in other cases, the constraints may be some general principles of linguistic interpretation. But in both cases, we have that a rich conceptual structure is activated as a first step, the second step being the active suppression of a good part of what was activated.

As said above, not all cases of concept-modulation or *ad hoc* concept construction consist in the suppression of features. In many cases, we add features, like when we say

‘drink’ to mean ‘alcoholic drink’ (Wilson and Carston, 2007). However, there is no apparent reason to believe that feature-addition requires a kind of representation not needed in feature-suppression. As Carston (2012; 13) contends, “all concepts occurring in communicated thoughts (explicatures) are pragmatically inferred and merely constrained by an encoded lexical schema/template or *an array of activated encyclopaedic information*” (my italics). My claim here is that *ad hoc* concept construction can be fully explained in terms of two constraining mechanisms: a rich lexical meaning (roughly, her “array of activated encyclopaedic information”) and pragmatic and/or compositional demands^{17,18}. Once again, we can do without schematic meanings.

6. Not all meanings are rich? The case of verbs

Until now I have been arguing for two different theses: first, that postulating semantic representations which constrain conceptual content, is at least unnecessary; and second, that lexical meanings are rich conceptual structures. However, the scope of these theses may well be restricted. In this section, I will suggest that, while prototypical nouns such as kind nouns have rich lexical meanings, at least typical verbs may have much thinner meanings.

I have tried to convince the reader that at least kind nouns can contribute to truth-conditional contents by contributing with parts or aspects of the rich concepts that constitute their lexical meaning. Systematic noun polysemy resolution is a matter of accessing a significant amount of information and selecting a part of it. Verbs seem to be notably polysemous as well. The verb ‘cut’ does not seem to mean the same in ‘cut the grass’ and ‘cut the cake’, not to mention ‘cut the interest rates’ or ‘cut at the rope’. There is some clear relationship between these different uses of ‘cut’, but it is

¹⁷ An anonymous referee asks about the differences between my position and Carston’s, as well as about what reasons I have to treat encyclopedic meaning as part of word meaning –and not merely as information associated to the word’s meaning. My idea is that word meaning is some kind of structured encyclopedic information, a body of knowledge (i.e. a concept), that encodes prototypical and causal (theory-like) information, as well as, probably, information about ideals, etc., that is, the knowledge that we use in categorization, induction, etc. It counts as word meaning, and not merely as knowledge associated to a word, for two reasons: first, because it has an explanatory role to play in explaining systematic variations in the contributions of words to truth-conditional contents; and second, because it is the only piece of knowledge that plays this role (given that neither literal meanings nor thin schematic meanings play any role, as I have tried to show).

¹⁸ As another anonymous referee suggests, this view has commonalities with Kecskes (2008), where he argues for a model according to which words store information about past contexts of use which can be modulated by current contextual information. That is, words give access to stable information, which is plausibly rich, which has an important role to play in linguistic understanding.

reasonable to say, on the face of it, that the semantic/conceptual contribution of ‘cut’ is not stable. The question that springs to mind is: should we treat verb polysemy in the same way we treat systematic noun polysemy, i.e., in terms of rich meanings? I.e. are they similar, or even the same, phenomenon? One first reason to be skeptic is that we do not seem to store as much information about verb denotations as we do about kinds of objects. As Carey (2009) puts it, kind-concepts are “inductively deep” (see also Millikan, 2000 on the difference between substances and classes)¹⁹. Event-type concepts, in contrast, do not allow for so many inductive inferences. If I am told that there was a cutting event, there is not much that I can infer (that is, unless I am told what was cut)²⁰. So it looks like the information stored in event-type concepts, being sparser, will not typically allow for there being parts or aspects to be selected. Another, second, reason to think that verb polysemy may be of a distinctive kind is that verb senses typically look like specifications: ‘cut the grass’ typically denotes an action where the grass is cut in its length, while ‘cut the cake’ typically denotes an action where the cake is cut into pieces. The different senses of, e.g., ‘school’, do not look like specifications of a more general, abstract, meaning in this same way (it could be held that school-the-building specifies the meaning of ‘school’, but it is difficult to say that what it specifies is a general, abstract, meaning). That is, whereas the regular polysemy that we find in some nouns cannot be accounted for in terms of common cores (Klepousniotou et al., 2008), or properly underspecific (vs. overspecific) representations (Frisson, 2009), the different senses of verbs do seem to share some features, and so to have a common core. I have argued elsewhere (Vicente, 2017) that this is due to the fact that the polysemy that verbs typically display is metaphor-based, whereas the regular polysemy patterns that nouns such as ‘school’ display is metonymy-based. Lastly, noun-polysemy is typically bounded, whereas verb polysemy seems relatively unbounded: the senses of a verb can extend in innumerable ways.

¹⁹ In fact, it seems that common nouns in general behave like attractors of information or nodes of inference. Even very small children are prone to generalize and make inferences when the label they hear is a common noun, but are much more cautious when the words used are adjectives or form descriptions (Fennell & Waxman, 2010). This is related to the essentialist stance: kind terms are assumed to denote categories with essences, categories which are the “joints” of nature. We store information about these categories because they are the ones which allow for inferences and generalizations. The point, thus, is that a kind term will typically give access to much more information, and will relate to a bigger/richer concept, than any other term.

²⁰ Some verb meanings are more informative than others in this respect. If I am told that there was a killing event, I can infer a good number of things. However, not many verbs are like ‘kill’, i.e. they do not store much information that subjects can use to draw inferences.

Let me begin with the relative unboundedness nature of verb senses. If it is conceded that the senses in play in ‘cut the grass’ and ‘cut the cake’ are different (though clearly related), then it seems that the senses of ‘cut’ can extend without any obvious limitation. This, of course, is not to say that ‘cut’ can be made to mean anything whatsoever. The point is just that there seems to be no principled list of possible senses of ‘cut’. A plausible reason for this behavior of verbs is that the different senses depend partly on their internal arguments. Thus, the habitual or default meaning of ‘cut the grass’ is different from the habitual meaning of ‘cut the cake’ because the meaning of ‘cut’ combined with the meaning of ‘grass’ differs from the meaning of ‘cut’ when combined with the meaning of ‘cake’. It is now well-attested that alleged semantic features of verbs such as aspectuality (whether they denote states, activities, accomplishments, or achievements) and the possibility of certain argument alternations, are rather features of at least the whole VPs (for aspectuality, Dowty, 1979; for argument alternations, Rappaport Hovav, 2014). As Levin and Rappaport Hovav (2013; 58) put it: “the conditions allowing an anticausative use of a verb are not determined purely by its lexical properties, but also depend on properties of the event described in a sentence with the verb”.

For instance, depending on the internal argument it takes, ‘cut’ may have different grammatical behavior. Thus, ‘cut’ typically enters into the conative alternation (‘John cut the rope’/ ‘John cut at the rope’), but not always: ‘the bank cut at its interest rates’ does not sound correct (Falkum, 2011)²¹. Thus, it seems that the different senses of verbs are generated or retrieved partly in composition, and in particular, that they partly depend on the internal argument verbs take (see Spalek, 2015, for development). A possible model which would explain this is the following: the lexical meaning of a verb contains sparse information, which can be described as abstract, or general, information. In contrast, internal arguments typically give access to rich conceptual knowledge. It is this rich conceptual knowledge what ultimately explains the occasional meaning that the verb expresses. Thus, one can say that in ‘cut the grass’, ‘cut’ means separating an object along the length dimension in at least two halves using an instrument, but only because the cutting event is a grass-cutting event. A way to explain how this occurs could appeal to a generative lexicon theory (Pustejovsky, 1995), where default phrasal

²¹ Another example: ‘break’ typically admits the anticausative alternation (‘John broke the window’/ ‘the window broke’), but not always: ‘John broke the law’ is ok., but ‘the law broke’ is not (see Spalek, 2015, Rappaport Hovav, 2014)

meanings arise as a result of interaction between the rich meaning of the nominal, and the thin meaning of the verb. An example is the different senses of ‘bake’ in ‘bake a potato’ (warm up) and ‘bake a cake’ (create), which is analysed in terms of a process of co-composition, involving an interaction between the schematic meaning of ‘bake’ and the lexico-conceptual information provided by the nouns (cakes are artefacts that come into being by baking them, so to bake a cake is to create it, whereas potatoes are natural kinds that come into being by growing, which means that baking a potato does not involve creating it, but just preparing it for being eaten).

As I say, default meanings of verb phrases plausibly depend on a thin meaning provided by the verb and rich meanings provided by its arguments (especially, by its internal argument). However, the meaning that a verb phrase expresses also depends on contextual factors. After all, it is possible to cut a rope lengthways, as well as to bake a (frozen) pizza –which is an artefact- by warming it up. Still, it is possible to hold that in these cases phrasal meanings also result from the interaction between the verb meaning and the meaning of its arguments. One can certainly cut a rope lengthways given that ropes are physical objects that have width as well as length. As length is more characteristic of ropes than their width, competent speakers will expect that ropes are cut transversally. But constructing the meaning of ‘cut the rope’ as “cut transversally” is not obligatory, given that it is not obligatory to conceive of ropes as things that only have length.

Suppose then that the lexical meaning of ‘cut’ is some abstract meaning that covers both uses of ‘cut’ in ‘cut the grass’ and ‘cut the interest rates’. Spalek (2015), for instance, proposes that the lexical meaning of the Spanish verb ‘cortar’ (roughly, but not exactly, equivalent to ‘cut’)²² encodes a change of state in which an entity which exemplifies some kind of connectedness undergoes a process of controlled disconnection. This kind of abstract meaning would be the common core present in the uses of ‘cortar’, both in the more “literal” and in the more “figurative” ones (like ‘cortar la circulación’/stop the traffic). This common core would then be enriched by interacting with the information provided by the verb’s arguments, an interaction that is sensitive to contextual information. The thin meaning of the verb could also be said to

²² The translation of ‘cut the interest rates’, for instance is not ‘cortar los tipos de interés’ but ‘*recortar* los tipos de interés’.

provide some kind of constraining conditions on its use; something such as: in normal conditions, one cannot call an event a ‘cortar’ event if there is no disconnection affecting an entity that was before connected in some way. In previous sections, I have argued that we do not need to hold that the lexical meanings of some terms encode constraints: both systematic (e.g. regular polysemy) as well as non-systematic variations in the meaning expressed by a word can be explained without appealing to a core meaning that plays a constraining role. However, it makes sense to think that if a family of terms have some kind of schematic meaning, such a schematic meaning will play some role in explaining when it is acceptable to use the word.

The picture about verb meaning we would end up with is similar to that suggested for word meaning in general by Recanati (2010) or Carston in several places, in that the lexical meaning of a verb is typically impoverished with respect to its occasional meaning, which is always a modulation of the lexical meaning. Note, however, that modulated verb-token meanings are not exactly Relevance Theory’s *ad hoc* concepts, at least under some interpretations of what these *ad hoc* concepts are. According to Allott and Textor’s (Allott and Textor, 2012) proposal, *ad hoc* concepts like the one expressed by ‘angel’ are somewhat vague and open-ended. Yet, modulations of verb lexical meanings do not seem to be like that. Rather, verb meaning modulations typically look more like specifications or concretizations. That is, modulations in this case seem to be easier to grasp than the meaning from which they derive.

So, overall, the idea that some words may encode more information than others seems to have some intuitive appeal. The systematic patterns of variation in the meaning of kind terms (from regular polysemy to Travis-green-leaves-cases) can be accounted for if we postulate rich meanings. However, we do not need rich verbal meanings to explain how verb phrases mean what they do. Moreover, the polysemy of verbs, being typically metaphor-based, suggests that we can account for it by appealing to core meanings, i.e., a collection of features that occasional meanings of the verb share. These core meanings can be rightly thought of as non-conceptual²³, although they are built out from core concepts such as CAUSE, CONTACT, GOAL, OBJECT, CONTAINMENT, or SUPPORT (see Jackendoff, 1992, Mandler, 2004, and Pinker, 2007 for the question about the

²³ As Carston puts it: “The question is whether there is any definite thought at all or whether any thought about opening [as such] must contain one of the more specific concepts”. (Carston, 2012;6)

conceptual character of these primitives). The important issue, in any case, is that these meanings would interact with the meanings of the arguments to provide a fully conceptual meaning to the verb phrase and, derivatively, to the verb. As mentioned above, this view is continuous with the currently prevalent view that semantic features of verbs such as aspect or argument realization are features not of verbs but of larger units.

Acknowledgements

This paper has benefited from input provided by: Ingrid Lossius Falkum, Tim Pritchard, Begoña Vicente, Mark Jary, Louise McNally, Marina Ortega, Elena Castroviejo, Myriam Uribe-Etxebarria, Javier Ormazabal, Dan Zeman, Lotte Hogeweg, Alexandra Spalek, and two anonymous referees from *JoP*. Research for this work was funded by Projects IT769-13 (Basque Government) and FFI2014-52196-P, of the Spanish Ministry of Economy and Competitiveness (MINECO).

References

- Allott, N., & Textor, M. (2012). Lexical Pragmatic Adjustment and the Nature of Ad Hoc Concepts. *International Review of Pragmatics*, 4(2), 185–208.
- Apresjan, J. D. (1974). Regular polysemy. *Linguistics*, 14(2), 5-32.
- Arapinis, A. (2013). Referring to institutional entities: Semantic and ontological perspectives. *Applied Ontology*, 8, 31-57.
- Arapinis, A. & View. L. (2015) A plea for complex categories in ontologies. *Applied Ontology* 10, 285-296.
- Asher, N. (2011). *Lexical Meaning in Context*. NY: Cambridge University Press.
- Barsalou, L. W. (1983). Ad hoc categories. *Memory & Cognition* 11 : 211– 27.
- Bierwisch, M. & Schreuder, R. (1992). From concepts to lexical items. *Cognition* 42, 23–60.
- Bloch-Mullins, C. (2017) Bridging the gap between similarity and causality: An integrated approach to concepts, *The British Journal for the Philosophy of Science*. <https://doi.org/10.1093/bjps/axw039>

- Blutner, R. (1998). Lexical underspecification and pragmatics. In: P. Ludewig & B. Geurts (eds.), *Lexikalische Semantik aus Kognitiver Sicht*. Tübingen, 141-171. Gunter Narr Verlag.
- Carey, S. (2009). *The Origin of Concepts*. New York: Oxford University Press.
- Carston, R. (2002). *Thoughts and Utterances*, London: Blackwell.
- Carston, R. (2008). Linguistic communication and the semantics/pragmatics distinction. *Synthese*, 165, 321–345.
- Carston, R. (2012). Word meaning and concept expressed. *The Linguistic Review*, 29: 607-623.
- Carston, R. (2013). Word meaning, what is said and explicature. In: Penco, C., Domaneschi, F. (Eds.), *What is Said and What is Not*. CSLI Publications, Stanford, pp. 175--204.
- Carston, R. (2016a). Contextual adjustment of meaning. In: Riemer, N (Ed.) *The Routledge Handbook of Semantics*. Abingdon: Routledge.
- Carston, R. (2016b). The heterogeneity of procedural meaning. *Lingua*, 175, 154-166.
- Cohen, L. J. (1971), Some Remarks on Grice's Views about the Logical Particles of Natural Language, in Y. Bar-Hillel (ed.), *Pragmatics of Natural Language*, Dordrecht: Reidel, pp. 50-68
- Chomsky, N. (2000). *New Horizons in the Study of Language and Mind*. Cambridge, England: Cambridge University Press.
- Cruse, A. (2004). *Meaning in Language: An Introduction to Semantics and Pragmatics*. Oxford: Oxford University Press.
- Del Pinal, G. (ms) A multidimensional Putnam-style semantics for Truth-conditional Pragmatics.
- Dowty, D. (1979). *Word Meaning and Montague Grammar*. Dordrecht: Reidel.
- Evans, V. (2009). *How Words Mean: Lexical Concepts, Cognitive Models and Meaning Construction*. Oxford: Oxford University Press.
- Falkum, I. L. (2011). The semantics and pragmatics of polysemy: A relevance-theoretic account. *PhD. Thesis*, University College London.
- Falkum, I. L., Vicente, A. (2015). Polysemy: Current perspectives and approaches, *Lingua*, 157. 1-6
- Fennell C. and Waxman, S. R. (2010), “What paradox? Referential cues allow for infant use of phonetic detail in word learning”, *Child Development*, 81: 1376-1383.

- Fernald, T.B (1999). Evidential coercion: using individual-level predicates in stage-level environments". *Studies in the Linguistic Sciences*, 29: 43-63.
- Foraker, S., and Murphy, G.L. (2012). Polysemy in sentence comprehension: Effects of meaning dominance. *Journal of Memory and Language*, 67: 407-425.
- Frisson, S. (2009). Semantic Underspecification in Language Processing, *Language and Linguistics Compass*, 3: 111-127.
- Frisson, S. (2015). About Bound and Scary Books: The Processing Of Book Polysemies, *Lingua* 157: 17-35.
- Gelman, S. A. (2003). *The essential child: Origins of essentialism in everyday thought*. New York: Oxford University Press.
- Goddard, C. & Wierzbicka, A. (2016) Explicating the English lexicon of 'doing and happening'. *Functions of Language* 23: 214-256.
- Hampton, A. James, Storms, G., Simmons, Claire L., and Daniel Heussen (2009). Feature integration in natural language concepts. *Memory and Cognition*, 37(8): 1150-1163.
- Hogeweg, L. (2012). Rich Lexical representations and conflicting features, *International Review of Pragmatics* 4 , Pages 209-231.
- Jackendoff, R. (1992). *Languages of the mind*. Cambridge, MA: MIT Press.
- Kecskes, I. (2008). Dueling contexts: A dynamical model of meaning. *Journal of Pragmatics* 40: 385-406.
- Klepousniotou, E., Titone, D., Romero, C. (2008). Making sense of word senses: The comprehension of polysemy depends on sense overlap. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 34, 1534-1543.
- Klepousniotou, E., Pike, G.B., Steinhauer, K., Gracco, V. (2012). Not all ambiguous words are created equal: An EEG investigation of homonymy and polysemy. *Brain and Language*, 123, 11-21.
- Knobe, J., Prasada, S., & Newman, G. E. (2013). Dual character concepts and the normative dimension of conceptual representation. *Cognition*, 127: 242–257.
- Levin, B. and M. Rappaport Hovav (2013). 'Lexicalized Meaning and Manner/Result Complementarity', in B. Arsenijević, B. Gehrke, and R. Marín, eds., *Subatomic Semantics of Event Predicates*, Springer, Dordrecht, 49-70.
- Machery, E. (2009) *Doing Without Concepts*. Oxford University Press.

- Machery, E. and Seppälä, S. (2011). Against hybrid theories of concepts, *Anthropology and Philosophy*, 10: 99-126.
- Mandler, J. (2004). *The Foundations of Mind*, Oxford: Oxford University Press.
- McNally, L., G. Boleda. (2017). Conceptual vs. Referential Affordance in Concept Composition. In Yoad Winter & James Hampton (eds.) *Concept Composition and Experimental Semantics/Pragmatics*, Springer.
- Millikan, R. (2000). *On Clear and Confused Ideas*. Cambridge, MA: Cambridge University Press.
- Moerdijk, F. (2008) Frames and Semagrams. Meaning Description in the General Dutch Dictionary. In Elisenda Berndal, Janet De Cesaris (eds.), *Proceedings of the XIII EURALEX International Congress* (Barcelona, 15-19 July 2008). 561-571.
- Pietroski, P. (2005) Meaning Before Truth. In Contextualism in Philosophy (G. Preyer and G. Peters, eds.), 253-300, Oxford University Press.
- Pietroski, P. (2017). Semantic internalism. In J. McGilvray (Ed.), *The Cambridge Companion to Chomsky*. Cambridge: Cambridge University Press.
- Pinker, S. (2007). *The Stuff of Thought*. London: Penguin Books.
- Pustejovsky, J. (1995). *The Generative Lexicon*. Cambridge, MA: MIT Press.
- Recanati, F. (2004). *Literal meaning*. Cambridge: Cambridge University Press.
- Recanati, F. (2010) *Truth-Conditional Pragmatics*, Oxford University Press.
- Rappaport Hovav, M. (2014). Lexical content and context: the causative alternation in English revisited, *Lingua* 141: 8-29
- Rubio Fernández, P. (2007). Suppression in metaphor interpretation: Differences between meaning selection and meaning construction. *Journal of Semantics* 24.4: 345-371.
- Ruhl, C. (1989). *On Monosemy*. SUNY Press, Albany, NY.
- Spalek, A. (2015). Spanish Change of State Verbs in Composition with Atypical Theme Arguments: Clarifying the Meaning Shifts, *Lingua*, 157: 36-53.
- Srinivasan, M. & Rabagliati, H. (2015) How concepts and conventions structure the lexicon: Cross-linguistic evidence from polysemy. *Lingua*, 157: 124-152.
- Travis, C. (1996) "Meaning's Role in Truth", *Mind*, 105: 451-466.
- Travis, C. (2008) *Occasion-sensitivity*. Oxford: Oxford University Press.
- Vicente, A. (2012). On Travis cases. *Linguistics and Philosophy*, 35, 3-19.
- Vicente, A. (2015). The green leaves and the expert: Polysemy and truth-conditional variability. *Lingua*, 157: 54-65.

- Vicente, A. (2017) Polysemy and word meaning: an account of lexical meaning for different kinds of content words, *Philosophical Studies*. DOI: 10.1007/s11098-017-0900-y
- Vicente, A., & Martínez-Manrique, F. (2016). The big concepts paper: a defence of hybridism. *British Journal for the Philosophy of Science*, 67 (1): 59-88.
- Wierzbicka, A. (1985) *Lexicography and conceptual analysis*. Ann Arbor: Karoma.
- Wilson, D. & Carston, R. (2007) A unitary approach to lexical pragmatics. Relevance, inference and *ad hoc* concepts. In N. Burton-Roberts (ed.). *Pragmatics*. Basingstroke: Palgrave MacMillan; 230-259.
- Weiskopf, D. (2011) The Theory theory of concepts. Internet Encyclopedia of Philosophy (on.line, April, 29, 2011).
- Yalcin, S. (2014) Semantics and Metasemantics in the Context of Generative Grammar. In A. Burgess and B. Sherman, eds. *New Essays in Metasemantics*. New York: Oxford University Press.
- Zarcone, A. (2014). *Event Knowledge and Models of Logical Metonymy Interpretation*. Universität Stuttgart. PhD Dissertation.