

Semantic Under-determinacy and Conceptual Constraints (Towards a Proposal about Lexical Meaning)

Delia Belleri

COGITO Research Centre, University of Bologna
delia.belleri2@unibo.it

Abstract In this paper, I focus on some examples of semantic under-determinacy, which give rise to the view that language involves some kind of context-sensitivity. Jason Stanley and others have argued that such context-sensitivity could be traced to the terms' syntax, or logical form. I offer an argument against this contention and defend a view in which context-sensitivity is traced to purely conceptual (semantic) constraints. I then explore the implications of this view on a conception of lexical meaning, urging that we should embrace a form of molecularism about the semantics of words.

Keywords: Semantic under-determinacy, Hidden indexicality, Unarticulated constituents, Schemata, Molecularism

0. Introduction

The idea that many linguistic expressions suffer from semantic under-determinacy, i.e. a failure to determine the truth-conditions of utterances, has led theorists to believe that context-sensitivity is more widespread in language than one might expect. In an attempt not to fall prey of strongly Contextualist, unorthodox and pragmatics-oriented accounts, authors such as Jason Stanley have tried to trace the context sensitivity of some semantically under-determined expressions to these expressions' syntax, or logical form. In what follows, I will firstly introduce the phenomenon of semantic under-determinacy (*section 1*) and illustrate Stanley's argument for the view that context-sensitivity has a syntactic root (*section 2.1*). I will then stress how Stanley's syntactic proposal is unnecessary (*section 2.2*) and how the context-sensitivity of semantically under-determined expressions can be cashed out in purely semantic terms. In particular, I will propose that the context-sensitivity of such expressions as "to rain", "being ready" and "being green" be cashed out in terms of what I call *conceptual constraints*, that is, ways of organising thought and language-use which determine our competence with such expressions as "to rain" and the attendant concepts (*section 3*). The underlying conviction is that it is the need to comply with these conceptual constraints that generates intuitions of semantic under-determinacy and ultimately motivates the view that these predicates are context-sensitive. In closing, I will tentatively extend my account of conceptual

constraints to a proposal on the structure of lexical meaning, gesturing at a “principled” way of rehabilitating a molecularist view (*section 4*).

1. From semantic under-determinacy to context-sensitivity

Semantic under-determinacy has been characterised as the failure of sentence meaning to determine the truth-conditions of an utterance (see Carston, 2002). Typical examples of semantic under-determinacy are (1)-(8), where, for instance, the compositionally determined meaning of (1), viz. that it’s raining, fails to determine a truth-condition for any (or nearly any) utterance of (1), in that it leaves out information concerning the location where the rain falls. Similarly, the compositionally determined meaning of (2), viz. that Jill is ready, remains unspecific with respect to the activity for which Jill is ready, and so on (Travis, 1975, 1985/2008, 1996, 1997; Bezuidenhout, 2002; Sainsbury, 2002).

- (1) It's raining [where?]
- (2) Jill is ready [for what?]
- (3) Olivia is tall [for what?]
- (4) Steel isn't strong enough [for what?]
- (5) Paracetamol is better [than what?]
- (6) Ben is waiting outside [of what?]
- (7) The guests are late [with respect to what?]
- (8) The leaves are green [in which respect?]

The idea of semantic under-determinacy often goes hand-in-hand with the thought that the sentences at issue involve a form of *context-sensitivity*, i.e. that the truth-conditions of their utterances are sensitive to one or more aspects of the context of the speaking, such as what location is salient in the case of “It’s raining”, what activity is salient in the case of “ready”, what comparison class is salient in the case of “tall” etc. An argument to this effect could be as follows: the meaning of sentences such as (1)-(8) as determined by their components and the way they are syntactically arranged is insufficient to render the truth-conditions of (most) utterances of these sentences; nevertheless, utterances of these sentences are understood by hearers, this meaning that their truth-conditions are grasped; if hearers manage to grasp the truth-conditions of these utterances, there must be something that supplements sentence meaning so as to make utterance truth-conditions fully exhaustive, most plausibly contextual clues. If this is so, then the truth-conditions of utterances of (1)-(8) in some sense depend or are sensitive to contextual clues (see Searle, 1980).

The nature of the context-sensitivity involved in (1)-(8) has been a matter of debate in the last decades. A number of theorists usually grouped under the label of Radical Contextualism, such as Sperber & Wilson (1986/1995), Carston (1988, 2002, 2004), Recanati (2004, 2010), Bach (1994), have it that the way in which the truth-conditions of (1)-(8) are supplemented is a matter of pragmatics. This implies that the process by which truth-conditions are completed doesn’t respond to semantic constraints, but only to constraints pertaining to relevance, informativeness, etc.

Authors who oppose this strand of thought have it that, by contrast, the context-sensitivity displayed by (1)-(8) is traceable to the logical form of the involved expressions. This is tantamount to issuing a syntactic hypothesis concerning the underlying structure of the predicates that give rise to semantic under-determinacy.

So for instance, it is held that the predicate “to rain” isn’t a monadic predicate with structure *to rain(x)*, but it has at least two argument-places—for times and locations—thus having structure *to rain(t, l)*. The “syntactic” approach to the context-sensitivity of (1)-(8) will be the initial focus of the present paper. In the following section, I will present the view and the main argument that has been marshalled in favour of it. I will criticise the position and, in the subsequent section, I will defend a different conception of the context-sensitivity of (1)-(8) in terms of *conceptual (semantic) constraints*. I will then explore the implications of this on an account of *lexical meaning*.

2. Context-sensitivity and Syntax

2.1 The argument from binding

Jason Stanley’s “Context and Logical Form” (2000) provides a forceful defence of the idea that the context-sensitivity of semantically under-determined sentences is a matter of syntax. Stanley’s arguments are directly relevant for all those approaches that may be labelled as “syntacticist” accounts of the context sensitivity of a number of expressions, including colour adjectives, quantifiers and relational terms such as “home” and “enemy” (see Stanley & Szabò, 2000; Stanley, 2002; Szabò, 2001; King & Stanley, 2005; Rothshild & Segal 2009).

Stanley’s primary, critical target is the idea (initiated by Perry, 1986) that sentences like “It’s raining” could express a full-blown, truth-evaluable proposition by being supplemented with so-called *unarticulated constituents*, i.e. elements that have no correlate in the sentence’s either superficial or deep syntax.

Stanley’s first step is that of acknowledging that sentences allegedly containing unarticulated constituents are subject to *bound readings*, in which «the interpretation of the alleged unarticulated constituent is controlled by an operator in the sentence» (STANLEY 2000: 411). Bound readings are purely semantic phenomena; nonetheless, Stanley endorses what he calls the *Binding Assumption* to the effect that, whenever there is a semantic binding, then there is also a syntactic binding: that is, «semantic binding and syntactic binding coincide» (STANLEY 2000: 412). This leads the way to Stanley’s conclusion to the effect that, whenever there is a bound reading, then the allegedly *unarticulated* constituent must be articulated, in virtue of the fact that binding as a semantic phenomenon must co-occur with binding as a syntactic relation, where syntactic items are articulated by definition.

To illustrate, let’s focus on “It’s raining”. According to the unarticulated constituents analysis, a simple occurrence of “It’s raining” has the logical form “It is raining (*t*)”. However, this logical form doesn’t correctly represent the content of an utterance of “It’s raining”, in that what utterances of this sentence usually express is *that it is raining at a certain time t at a certain location l*. Here, theorists such as Perry contend that the location figures in the expressed content as an unarticulated constituent. Stanley thinks that this analysis is incorrect. For consider the following sentence:

(9) Every time John lights a cigarette, it rains.

The proposition expressed by (9) is very plausibly *that every time John lights a cigarette, it rains in the location l where John lights the cigarette*. The proposition exhibits a semantic binding in the sense that the quantified phrase “Every time John

lights a cigarette” seems to introduce a restriction upon the space-time locations at which it rains—viz. the restriction that these be the space-time locations in which John is lighting a cigarette. Since there is a semantic binding, then there must be a syntactic binding, i.e. the operator introduced by “every time ...” must bind a variable *l* ranging over locations (besides obviously binding a variable *t* ranging over times). But if the location *l* is an unarticulated constituent, then it cannot be bound, since (as it follows from the previously endorsed *Binding Assumption*) binding operators only bind elements which are articulated in the syntax.

The result would be that an analysis in terms of unarticulated constituents would only predict an *unbound* reading of (9), namely the reading *that every time John lights a cigarette, it rains in some contextually salient location l*. Since the bound reading is also an available reading for (9), but an unarticulated constituent analysis doesn't capture it, Stanley concludes that an account in terms of variables in logical form is preferable, since it maintains the possibility for both the bound and the unbound reading.

In general then, Stanley argues that a syntactic analysis of the context-sensitivity of terms like “to rain”, “ready”, “tall” etc. is superior to an account in terms of unarticulated constituents, because it captures the whole range of available interpretations of sentences like (9), which includes unbound and, most importantly, bound readings.

2.2 A counter-argument from zero-readings

The syntactic approach seems to offer a significant advantage over its unarticulated constituents competitor, however I claim this advantage doesn't conclusively establish the view as superior in general. In what follows, I will present some cases that challenge the alleged superiority of the syntactic account.

I would like to call attention on a phenomenon that I shall call “Zero Reading”. I shall describe the phenomenon, make some examples and finally argue that a Stanley-style solution cannot satisfactorily capture it. This will count as a fault for all those accounts inspired by the syntacticist idea, and shall prompt us to search for an alternative solution.

First of all, some simple facts about the way we talk about rain, being ready and so on. Not every time we talk about rain do we talk about a place where it rains. Sometimes we are just interested in rain as *a phenomenon of rain-falling*. Analogously, not every time we talk about someone or something being ready do we talk about a purpose for which someone or something is ready: sometimes we may just be interested in *the state of being ready*. This *doesn't imply* that, when we are engaged in this kind of talk, we somehow believe or presuppose that rain-falling events do not occur at a place and a time; or that states of being ready are not states of being ready for some activity. I think we can safely say that our *concept* of rain-falling events continues to be one in which these episodes happen at a location and a time, and analogous considerations apply to states of being ready (but also being tall, being green, being enough). Hence, the structure of our concepts of rain events, readiness, greenness etc. does not change, even though it seems that in talk we can “bracket”, or “leave in the background” aspects of these events and states such as locations, purposes, parts; we can temporarily treat expressions like “to rain”, “being ready”, “being green” as if, at the syntactic-linguistic level, they were monadic predicates, even though at the conceptual/semantic level they are clearly more complex.

I shall call a *zero-reading* of “It’s raining”, “X is ready”, etc. a reading of an utterance of these sentences in which the predicates are *feliculously used with a monadic syntactic structure*. Here are some examples:

- (10) Whenever the temperature and humidity in the air reach a certain level, it rains.¹
(11) Whenever she is prepared for an activity, Jill is ready.

Sentence (10) speaks about episodes of rain-falling as if they were self-contained, self-standing events. In order to see this, one could try to substitute the occurrence of “it rains”/“it rained” with a construction involving the phrase “an event of rain takes/took place”. Thus, sentence (10) states that whenever the temperature and humidity in the air reach a certain level, *an event of rain takes place*. Here locational aspects play a role at the truth-conditional level—after all, that an event of raining takes place necessarily presupposes that there is a location—but this role need not correspond to anything at the syntactic-linguistic level. Again, I take sentence (11) to feature an occurrence of the predicate “being ready” as a *monadic* predicate. Like in the previous case, we could easily see this by substituting the occurrence of “is ready” or “being ready” with the phrase “being in a state of readiness”. Thus, sentence (11) states that if Jill is prepared for any activity, then she is in a *state of readiness*. That readiness is readiness with respect to an activity is certainly part of the truth-conditions, however, the predicate needs not be dyadic in its structure in order for such an aspect to be part of the truth-conditions.

How should the syntacticist deal with zero readings? Remember that the thesis claims that “to rain”, “being ready”, “being green” contain an extra argument-place in logical form for locations, activities or parts respectively. In none of the above examples there is a way of filling in that argument-place. This implies that the argument position ultimately remains *vacant*, as in (10’) and (11’):

- (10’) Whenever the temperature and humidity in the air reach a certain level, it rains(*x*).
(11’) Whenever she is prepared for an activity, Jill is ready(*x*).

Typically, open sentences are true or false only with respect to an *assignment* of value to the free variables that occur in them. The variables that occupy the relevant argument-places therefore need to be assigned a value; the argument positions cannot stay vacant or unsaturated, on pain of the sentences not expressing any evaluable content. The syntacticist is therefore bound to the claim that (10) and (11) as they stand, are unevaluable until a value is assigned to the free variables that occupy argument positions in their logical form. This strikes me as simply not true: each of these sentences expresses an intelligible, evaluable content, independently of any alleged value-assignment.

The syntacticist could offer the following explanation of why (10) and (11) express intelligible and evaluable contents. There are two possibilities: Either the variables are “freely” assigned a specific value contextually (for instance, Paris), as in (10a), or they get bound by a quantifier as in (10b).

- (10a) Whenever the temperature and humidity in the air reach a certain level, it rains *in Paris*.

¹ See also Cappelen & Hawthorne (2007), Recanati (2010) for a similar example.

(10b) For every time t_i and every place l_i in which the temperature and humidity in the air reach a certain level, it rains at t_i in l_i .

(10a) strikes me as utterly mistaken as a way of spelling out a supposed zero-reading: the value assignment appears arbitrary and not in accordance with the most natural interpretation of (10), which is a general statement that doesn't concern any location in particular. As far as (10b) is concerned, my inclination is to say that it is fine, but this doesn't offer much comfort to the syntactacist. This is because bound readings like (10b) are available even if one doesn't believe that "to rain" has a complex syntactic structure $rain(x, y)$.

In order to make the point fully intelligible, I should distinguish between three levels at which complexity can be detected when rain discourse is concerned: (i) the level of syntactic structure, which is subject to the syntactic relations of Generative Grammar (e.g. c-command); (ii) semantic structure, which could be rendered *via* a regimented language (e.g. quantified first-order logic); (iii) what I shall call *metaphysical* structure, roughly the way states, events and processes are taken to be built up. I believe bound readings like (10b) are available even if one doesn't think that "to rain" has *syntactic* structure $rain(x, y)$. But I am open to the idea that "to rain" has *semantic* structure $rain(x, y)$ (that the concept or property denoted by "to rain" is dyadic); I also maintain that rain events have a dyadic *metaphysical* structure (after all, rain events necessarily occur at places and times). My argument only purports to counter the syntactacist's claim to the effect that "to rain" features some extra syntactic complexity—not any other thesis about the underlying complexity of rain discourse (for instance at the semantic or metaphysical level).

The point so far has been that bound readings are available even for those who do not assign to "to rain" a dyadic syntactic structure. But how could someone of these persuasions account for binding? One account may be in terms of so-called *variadic functions*: "to rain" has syntactic structure $rain(x)$, but its adicity is expanded in appropriate contexts, such as quantified ones; once the predicate has acquired an extra argument-place, this can be occupied by a variable which gets bound by a quantifier (cf. Recanati, 2002; Carston, 2002; Bach, 2000; Marti, 2006). Proponents of a Davidson-style *event-analysis* too could devise such a bound reading, as Cappelen & Hawthorne (2007) show: it is sufficient to suppose that the predicate "to rain" is monadic and applies to *events*, which are identified in terms of their spatio-temporal coordinates; these coordinates can be represented in the semantic interpretation of the sentence (when appropriate) by variables ranging over times or locations and be bound accordingly by quantifying operators. Both these accounts strike me as principled and perfectly legitimate. So, the bound reading option is not exclusively available to the syntactacist.

The crux of the objection is ultimately the following: the syntactacist *cannot* rule out a reading like (10a) on the account that he believes that "to rain" has a dyadic syntactic structure $rain(x, y)$. This implies that the option is available to read (10) as an open sentence, which in turn entails that (10a) remains available. This is problematic to the extent that there are other, competing accounts according to which (10a) doesn't obtain, because the predicate "to rain" is monadic and a failure to specify the locational element doesn't entail that a sentence like (10) is analysed as an open sentence.

The syntactacist's problem could be summarised as one of "over-theorising": because it envisages predicates like "to rain", "being ready" etc. as syntactically polyadic, when these predicates seem to be felicitously used as syntactically monadic ("zero-

reading”) it cannot but posit an unsaturated argument-place. This “over-theorising” problem doesn’t affect non-syntacticist accounts which do not posit such a hidden complexity in the logical form of these predicates: when a zero-reading obtains, a proponent of the non-syntactic account doesn’t have to accommodate any extra-complexity, because, in the view at issue, there is no extra-complexity to begin with. So, if zero-readings stem from our felicitous use of “to rain”, “being ready”, etc. as syntactically monadic predicates, a non-syntacticist can explain these readings with the idea that we are *indeed* using monadic predicates *rain(x)*, *ready(x)*, etc. The syntacticist, on the other hand, has to resort to bound readings in order to explain the fact that we seem to use monadic predicates—when in fact, in his view, we are using dyadic predicates.

It may be pointed out that the considerations offered above are no argument in favour of the view that predicates like “to rain” are monadic, and so that I haven’t shown in any conclusive way that that is the correct view. Yet I think this is not something that I need to do here: this is because the claim I defend (as to the syntactic simplicity of the mentioned predicates) is nothing but *the received view*, the burden of proof lying on those theorists who, like Stanley, wish to question it and add extra syntactic complexity. So, at least for the purposes of arguing against the syntacticist, it is enough to show that the same effects, that he claims to be explainable only by means of additional positions in logical form, can be explained even by views that posit no such extra elements—which are no more and no less than the received view.

In conclusion, I have argued that the syntactic approach may elegantly capture bound readings when these intuitively occur (as Stanley argues), however it fails elegantly to account for zero-readings when these obtain. Moreover, we have seen that non-syntactic approaches may have a principled account of bound readings anyway, so it seems that, all things considered, the syntactic view doesn’t offer an account which is superior to its competitors.

3. Tracing Context-sensitivity to Conceptual Constraints

In view of the previous considerations, I suggest that we move away from a conception of the context-sensitivity of such terms as “rain”, “ready”, “green” etc. which posits extra slots in the (hidden) syntax of these expressions. I propose that the context-sensitivity of these expressions be traced to what I will call *conceptual constraints*, i.e. constraints that operate on a conceptual/semantic level rather than on a syntactic level.

Conceptual constraints could be characterised as *ways of typically organising and structuring thought and language use about specific matters*. For instance thought and language use concerning rain is typically organised so as to comprise information about times, places, types of substances falling from the sky (occasionally ways in which it rains, e.g. with more or less intensity), etc. Thought and language use concerning readiness is typically organised so as to provide information about persons, activities for which they are ready or inanimate objects and purposes for which they are ready, and so on.

Some very basic constraints must be met in order for thought and language use on these matters to be judged as “competent”. Some of the conceptual constraints that have to be abided by are, with regard to rain: that rain falls at a time and a place; that raining involves water falling from the sky—perhaps also that raining causes surfaces and things in general to be wet, etc. Conceptual constraints to be observed in matters of readiness are, e.g., that there be a subject involved who is about to perform

a certain activity or an object which is about to be used for a certain purpose. In terms familiar to cognitive psychologists, we may view conceptual constraints as evoking very general and fundamental *schemata*², i.e. structured configurations divided into different “dimensions” or “slots” that have to be taken into account for competent use.

Let me clarify that conceptual constraints are *not* a way of describing or re-describing the nature and structure of predicates (or even concepts). The general picture could be canvassed as follows: there are predicates (“to rain”, “being ready”) and attendant concepts (RAIN, READY); both these predicates and concepts are, of course, routinely employed in language and thought respectively. The conceptual constraints view tells us that a number of constraints regulate correct usage—they help to discriminate between competent and incompetent uses. Yet conceptual constraints *per se* shed no light on the nature and structure of predicates (especially the syntactic one) or even of concepts, a matter on which different positions are available. For instance, the view assumed here (which is again *the received view*) is that predicates like “to rain” and “being ready” have a monadic syntactic structure, while their semantic or conceptual structure may as well be dyadic; this being said, my claim here is that their use is regulated by a variety of conceptual constraints (such as “rain occurs at a place and a time”).

It seems reasonable to suppose that conceptual constraints are employed in utterance comprehension too, to flesh out the contents of semantically under-determined sentences. On the assumption that hearers master the relevant constraints, we can suppose that *hearers exploit conceptual constraints* (together with information about the context, the speaker's intentions and so on) in order to reconstruct the content and truth conditions of utterances of under-determined sentences. For instance, suppose a speaker utters “Jill is ready”. This sentence is semantically under-determined. Provided that the hearer is a competent user of the predicate “being ready” as well as of the concept READY, she can use the conceptual constraint that readiness is readiness for some purpose/activity, plus information that she may have gathered from the context concerning Jill's particular purpose, in order to reconstruct the truth-conditions of this utterance. The hearer may be in a position to perform this reconstructive task insofar as these conceptual constraints are part of the way of organising thought and discourse that she shares with the speaker. A precondition for doing this is certainly that the hearer has at least the background presupposition that the speaker is a competent language- and concept-user, i.e. that she structures thought and discourse about being ready in terms of being ready for some purpose. If this presupposition is in place and there are no reasons for defeating it, then the hearer can proceed with applying her own conceptual/semantic competence.

What's the advantage of adopting conceptual constraints over covert extra syntactic positions?

Firstly, the conceptual constraints view could allow the theorist to capture zero readings *and* bound readings, thus performing overall better than Stanley's syntactic account. It could capture *zero readings* because it is fully compatible with the view that predicates like “to rain”, “being ready”, “being green” are syntactically monadic. Thus, it is not faced with the difficulty of explaining why these predicates can be felicitously used as monadic – as in (10) and (11) –, because they could be considered as *just* monadic. Moreover, the view could exploit the idea of conceptual constraints to account for *bound readings* in (10) and (11). For instance, the bound

² For the notion of *schema*, see Rumelhart & Ortony (1977), Rumelhart (1980).

reading in (10b) could be motivated as follows: it is a conceptual constraint associated with the predicate “to rain” that every event of raining occurs at a location; this would imply that use of “it rains” in (10) should be interpreted as meaning that it rains *at a certain location*. But since the rain event was associated with situations where temperature and humidity reach a certain level, the most sensible interpretation of (10) would be one whereby the “Whenever...” clause introduces a binding operator on the embedded clause “it rains”, thus delivering the bound reading to the effect that, whenever *at t_i and l_i* temperature and humidity reach a certain level, it rains *at t_i and l_i* .

Secondly, the idea of conceptual constraints sits nicely with *intuitions of good formation*. If the context-sensitivity of the expressions at hand were really owed to their syntactic structure, then a failure to fill in these syntactic positions should result in intuitions of ill-formation. However, nothing of the sort happens with expressions like “to rain”, “being ready” etc. To illustrate the point, compare the following:

(12) Is ready

(13) Jill is ready

While with (12) one has the clear intuition of being presented with a non-well-formed sentence, in (13) the expression is clearly well-formed. This pattern of intuitions is particularly telling: although (13) is semantically under-determined due to the fact that the sentence fails to specify for which purpose Jill is ready, failure to specify this information by no means entails disregarding the syntactic structure of the predicate and this is revealed by the fact that (13) elicits no intuition whatsoever of bad formation. By contrast, the defectiveness exhibited by (12) derives from failing to provide the subject to which the predicate “is ready” applies, where this clearly also amounts to a syntactic flaw, as the intuition of bad formation testifies. So, if intuitions of good/bad formation are indicative of whether a certain phenomenon is syntactic, then the fact that semantically under-determined sentences give rise to no intuition of bad formation gives us a reason to believe that, whatever flaw these expressions suffer from, it is not a syntactic one; relatedly, we have reasons to believe that the context-sensitivity of the expression won’t be resolved by saturating any syntactically articulated slot, because we have no intuitions of bad formation telling us that there’s any syntactic constraint being disregarded.

Finally, the idea of conceptual constraints is good for methodological reasons, because it avoids introducing unjustified syntactic posits. This is in direct contrast with Stanley’s view, which explicitly aims at making an empirical claim about the real syntax underlying our language. The problem of Stanley’s approach, as Collins (2007), Neale (2007) and Pupa & Troseth (2011) have pointed out, is that he postulates syntactic forms based on semantic considerations—having to do with bound *readings* (plus the thesis that semantic binding corresponds to syntactic binding, which he however fails to thoroughly substantiate). This, as the above mentioned authors allege, is methodologically flawed. In light of these criticisms, it may be safely maintained that the conceptual constraints view is responsible of no hasty syntactic pronouncements, because it is not a syntactic claim to begin with.

4. Molecular Lexical Meaning: a Competence-based proposal

So far I have only talked about conceptual constraints as ways in which thought and language-use may be organised and structured, however it would seem worthwhile to

explore the idea that conceptual constraints also are *meaning* constraints. Since these constraints operate on single concepts, they will plausibly also govern the meaning of single words, so let them be *lexical constraints*. Extending the conceptual constraints account to lexical meaning can't but have implications in the way the semantics of words is conceived. In this section I will explore these consequences in light of the main current positions regarding the nature and structure of lexical meaning. The character of the remarks to follow will be admittedly tentative and exploratory, my main aim at the moment being that of gesturing at a possible way of adapting the conceptual constraints proposal to an account of lexical meaning.

Before introducing the matter, though, let me make clear that I regard conceptual constraints as more fundamental than meaning constraints, for the following reasons: I take it that mastering the meaning of a certain lexical item entails mastering the conceptual constraints of the related concept. For instance, if I know the meaning of the word "chair" in English, intuitively I also master the constraints associated with the concept CHAIR – whatever these are. However, it seems that the converse doesn't hold: if I master the concept CHAIR, this doesn't imply that I also master the meaning of the English word "chair" or, for that matter, of any other word in any other human language. It may be objected that I *could not have learned* the conceptual constraints on CHAIR unless I had been competent on some human language: as far as I can see, this much could be conceded, however this would not suffice to reinstate the implication, for a situation could be conceived in which I lose memory of the relevant word and its meaning but I retain my competence on the concept, thus being able to (somehow) talk about and deal with chairs in the real world without strictly speaking using the word. If these considerations are correct, it seems that mastering conceptual constraints is more fundamental than mastering lexical constraints, in that the former could be retained even in absence of linguistic competence, while the latter clearly could not.

This being said, extending the conceptual constraints account to lexical meaning has some consequences that are worthy of consideration. For the moment, let us grant that such extension entitles us to say that lexical meaning is subject to constraints that are altogether parallel to those I have characterised as conceptual constraints, i.e. *ways in which thought and language use is structured such that they serve to set apart competent from incompetent usage*.

It seems that, by endorsing the idea of lexical constraints, one embraces the thesis that lexical meaning is *complex* to some extent. In the Generative Grammar tradition, the thought that the meaning of words is composite goes back to Katz & Fodor (1963), Katz (1972) and to more recent contributions like those of Bierwisch (1983), Jackendoff (1990), Pustejovsky (1995), and Pinker (2007). In philosophy, the position is represented by those authors who regard the meaning of terms as depending on their role in language—typically, an inferential role (cf. Brandom, 2000; Boghossian, 1994). Philosophers like Taylor (2001, 2003) and Neale (2007) also seem close to an idea of lexical complexity when they put forth the view that the "subsyntactic" structure of terms is complex.

Such a conception of lexical meaning is exposed to the threat of *holism*: once it is recognised that the meaning of a word is composite and it depends on the meaning of other words, it seems that there's no principled way of setting an upper limit to how many words' meanings the meaning of a single word depends on. This would result in a number of unpalatable consequences: for instance that, in order to know (learn) the meaning of a word *w*, one would have to know (learn) the entire language. Or, in order to understand what a certain word *w* means in someone's idiolect, one would

have to understand all of it (cf. Dummett, 1973). Other unpleasant consequences have to do with the possibility of maintaining scientific Realism: if the meaning of a word w in a theory T depends on the meanings of words $w_1, w_2... w_n$ in T , then those who don't endorse T could not mean the same with w ; this, however, leads to an incommensurability between theories and to the trivial truth of Realism—with respect to each single theory T . Meaning holism also jeopardises the possibility of retaining a respectable theory of the contents of our intentional states: if believing that p depends on having beliefs $b_1, b_2... b_n$, then one would have to share all the beliefs of another person in order to share the belief that p (cf. Fodor & Lepore, 1992). Far from being a principled refutation of meaning holism, a list of all these difficulties should make it apparent to the reader how controversial and theoretically unsafe such a position is.

The most radical alternative to holism, namely *atomism*, is equally not appealing. Fodor's (1998) atomism has it that concepts (and derivatively, meanings) are nothing but mental symbols in the language of thought, whose content is determined by symbol-world relations and not by structural aspects such as inferential role or other relationships to other concepts. Although his account is clear on how causal-cum-nomological relations determine the content of such concepts as RED, DOG, etc., namely objects, properties, states or events with which we might be perceptually in touch, it's less clear how mere symbol-world relations could fix the content of abstract concepts, or of concepts associated with non-existing entities. With respect to these concepts, it seems that an account that appeals to their role or relation to other concepts, and thus to an internal structure, offers a much more plausible picture, not only of how their content is determined, but also of how they are acquired. In other words, the atomistic proposal may work effectively only for some types of concepts, so it could at best be a *partial* account of how our concepts (and derivatively, our lexical meanings) work semantically: it could not be the whole story.

Molecularism seems to be a reasonable compromise between the two extremes of atomism and holism. Molecularism has it that the meaning of words is complex and thus non-atomic; *plus*, the meaning of any word w depends on *some but not all* meanings of other words (see also Dummett, 1993: 44). This view clearly faces the problem of delimiting the information that is “meaning-constitutive” as opposed to information which is still relevant but not constitutive for meaning, or altogether irrelevant.

An attempt in this direction could imply following Carnap (1952) and regard “meaning postulates” as specifying meaning-constitutive features on the account of their being *analytic truths*, i.e. truths by virtue of meaning alone. However, using analytic truths in order to isolate the core meaning of terms may not suffice if by “core meaning” one also means “what every competent speaker must know in order to know the meaning of the word”. That is, analytic information and information required for competent use may not coincide. For example, it seems that the non-analytic sentence “Water is H₂O” is required for competent use of the word “water” (at least nowadays, in the actual world and for certain groups of people), alongside with an analytic sentence like “Water is wet”³.

³A referee objects that people may competently use the term “water” without knowing whether water is H₂O, for instance children. I agree that we may regard children as competent *enough*. Yet, surely a chemist would count as utterly incompetent with the word “water”, were she to ignore that water is H₂O. In order to account for this difference, we may say that “water” in the mouth of the child (and of the science-illiterate) means one thing while “water” in the mouth of the scientist means something

Thus, both analytic and non-analytic information may be required for competent use, and our intuitions indeed regard both analytic and non-analytic sentences as belonging to so-called “dictionary information”, i.e. information that most closely pertains to the word’s meaning, as opposed to “encyclopedia information”, i.e. information that pertains to the world. This point is emphasised by Marconi (1997), who traces a “metric” of the information which is intuitively judged as dictionary-like—typically including truths that are either analytic (meaning-constitutive) *or* necessary *or* universal—and information which is intuitively judged as encyclopedia-like—typically including non-analytic (non-constitutive) *or* contingent *or* particular information.

A radical alternative is taken by Borg (2012), who adopts an atomistic view of lexical meaning and at the same time maintains that lexical entries contain some information, which is however *not* meaning-constitutive, but only specifies to which lexical categories a term belongs and thus constrains competence on the *syntactic environments* in which the word can correctly occur, not on what the word means (Borg, 2012: 196).

Both these views seem to me to have difficulties explaining “in virtue of what” certain information is relevant for the lexicon—whether or not it is meaning-constitutive. This is quite clear in Marconi’s proposal, which tries to rationalise lexical pieces of information by subsuming them to, for instance, analyticity constraints, necessity constraints, universality and non-revisability constraints etc., but ultimately offers *no unitary criterion* for what counts as dictionary-level as opposed to encyclopedia-level information. Borg’s proposal faces a similar difficulty: it considers only the lexical information that poses constraints on syntax (for example that the verb “hit” implies “make contact”, thus constraining a number of grammatical forms) but it excludes all that information which may be intuitively lexical but has no bearing on syntax (for instance that “dog” implies “mammal”), simply disposing of it as “world knowledge”. However, it’s not clear why *only some* meaning-related information, namely that having repercussions on the term’s syntactic behaviour, should be lexically relevant.

In the remain of this section, I will attempt a proposal in order to regain a principled, unitary answer to the vexed molecularist question: “How is meaning-relevant information delimited?”, which at the same time avoids appeal to specifically *semantic* notions. The character of these remarks is still highly speculative and no doubt more work will be required to refine the view.

My proposal is basically to reverse the perspective so far adopted: it is information that counts for competence that feeds into lexical information, not the other way round. Stated otherwise, the information that counts for competence comes first and it determines the information incorporated by a lexical entry. In this way, we can restore the view that the information at issue is also meaning-constitutive, where the notion itself of meaning is now defined simply in terms of “competent use”—irrespectively of considerations of analyticity, necessity, universality or non-revisability.

The proposal is extremely sketchy and, admittedly, still at a purely programmatic stage. A way of adding a bit more detail could be the following: take all the information that counts for competently using the predicate “to rain”: that rain falls at a place and time; that rain implies the falling of water from the sky; that being

different (see Sundell, 2011). But even so, it seems that *there is* a word full competence on which requires knowledge of the non-analytic truth to the effect that water is H₂O.

exposed to rain entails becoming wet; and so on. All this information becomes part of the lexical information associated with “to rain”. This is *not* to say that syntax-related, argumental, thematic and other information is removed and replaced by pure, competent use-determining information. As long as some information is deemed necessary and sufficient for competent use, it shall enter into lexical information. This entails conceiving lexical meaning as even richer than other theorists who already cash out lexical meaning as quite complex and articulated admit (e.g. Pustejovsky, 1995).

All this allows us to regain a form of molecularism, according to which the information that counts as meaning-constitutive is all and only the information that counts for *competent use* by a normal speaker of the language at issue. The view is a bona-fide molecularism because, in ordinary language use, the information that counts for competent use doesn't typically require the speaker to master *the whole language* (or even a big portion of language). Most importantly, this kind of molecularism is in a position to give a *principled answer* to the vexed question “How do you delimit meaning?”, according to which *one first determines what counts for competent use and then defines meaning-constitutiveness accordingly*.

The view importantly assumes that that of competent use is a *primitive* notion: no further semantic explication of what counts as competent is to be expected from the view. Obviously enough, competent use will have to generally track the truth of matters in some systematic manner, but other than that no compliance with specifically semantic notions such as that of analyticity (let alone epistemic (a priori/a posteriori) or metaphysical (contingent/necessary) notions) should be mobilised in order to define what competent use amounts to. Presumably, competent use will depend for its most part on what the established linguistic practices of a community are, so it will be a largely “pragmatic” or “practical” notion.

No doubt the task of delimiting meaning on these grounds will *not* be easy: what counts for competent use changes over time and according to the group a speaker belongs to (experts and non-experts, for instance). The characterisation will inevitably have fuzzy borders and it won't be completely stable over time; however, what's important is that the answer to the vexed question mentioned above be *principled*. Furthermore, it may be pointed out that the view risks being “too liberal” about what counts as meaning-constitutive. Though an accurate response to this kind of worry will have to be postponed, it feels safe to say that we have a firm enough grip of what counts for competent use *proper*, where this involves some sort of *normativity*, as opposed to merely felicitous use, which is not normatively conceived. The result is a view on lexical meaning that could be dubbed *Competence-based Molecularism*, consisting in the following conjunction of theses: (a) lexical meaning is complex and structured; (b) the meaning of a word *w* depends on some but not all of the meanings of the words in a language *L*; (c) meaning-constitutive information is nothing but the information required for competent use of a word *w*, where “competent use” is a primitive notion.

5. Conclusion

In this paper, I have argued that the context-sensitivity of certain expressions is better conceived in conceptual/semantic, rather than syntactic terms. I have then articulated a proposal in terms of “conceptual constraints” and I have extended it to lexical meaning, thus trying to rehabilitate molecularism on lexical meaning. First I have characterised conceptual constraints as ways of organising and structuring thought

and language use and, in particular, as determining constraints on *competent* concept use. Extending the idea of constraints on competent concept-use to language and lexical items in particular, what is obtained is the view that words are associated with constraints that govern their competent use. Once it is allowed that it is *these* constraints that determine meaning-constitutive lexical information (and not the other way round), then the way is cleared for a form of principled molecularism. Thus, the Conceptual Constraints View and Competence-based Molecularism form an integrated and consistent “package” for conceiving of both thought and language.

References

- BACH, Kent (1994), «Conversational Implicature», in *Mind and Language*, n. 9 pp. 124-162.
- BACH, Kent (2000), «Quantification, Qualification and Context: a Reply to Stanley and Szabó», in *Mind and Language*, n. 15, pp. 262-283.
- BEZUIDENHOUT, Anne (2002), «Truth-conditional Pragmatics», in *Philosophical Perspectives*, n. 16, pp. 105-134.
- BIERWISCH, Manfred (1983), «Formal and lexical semantics», in *Linguistische Studien*, n. 114, pp. 56–79.
- BOGHOSSIAN, Paul (1994), «Inferential role semantics and the analytic/synthetic distinction», in *Philosophical Studies*, n. 73, pp. 109-122.
- BORG, Emma (2012), *Pursuing Meaning*, Oxford University Press, Oxford.
- BRANDOM, Robert (2000), *Articulating Reasons: An Introduction to Inferentialism*, Harvard University Press, Harvard.
- CAPPELEN, Herman & HAWTHORNE, John (2007), «Locations and Binding», in *Analysis*, n. 67, pp. 95-105.
- CARNAP, Rudolf (1952), «Meaning Postulates», in *Philosophical Studies*, n. 3, pp. 65-73.
- CARSTON, Robyn (1988), «Implicature, Explicature, and Truth-Theoretic Semantics», in KEMPSON, R. (a cura), *Mental Representations: the interface between language and reality*, Cambridge University Press, Cambridge, pp. 155-181.
- CARSTON, Robyn (2002), *Thoughts and Utterances: the pragmatics of explicit communication*, Blackwell, Oxford.
- CARSTON, Robyn (2004), «Explicature and semantics», in DAVIS, M. & GILLON, B. (a cura) *Semantics: A Reader*, Oxford University Press, Oxford.
- COLLINS, John. 2007, «Syntax, More or Less», in *Mind*, n. 116 (464), pp. 805-850.

- DUMMETT, Michael (1973), *Frege: Philosophy of Language*, Duckworth, London.
- DUMMETT, Michael (1993), «What is a Theory of Meaning? (II)», in *The Seas of Language*, Clarendon press, Oxford.
- FODOR, Jerry (1998), *Concepts. Where Cognitive Science went Wrong*, Oxford University Press, Oxford.
- FODOR, Jerry & LEPORE, Ernie (1992), *Holism: A Shopper Guide*, Wiley-Blackwell, UK.
- JACKENDOFF, Ray (1990), *Semantic Structures*, MIT Press, Cambridge MA.
- KATZ, Jerrold (1972), *Semantic theory*, Harper & Row, New York.
- KATZ, Jerrold & FODOR, Jerry (1963), «The Structure of a Semantic Theory», in *Language*, n. 2., pp. 170-210.
- KING, Jeffrey & STANLEY, Jason (2005), «Semantics, Pragmatics, and the Role of Semantic Content», in SZABÓ, Z.G.(a cura) *Semantics vs. Pragmatics*, Oxford University Press, Oxford.
- MARCONI, Diego (1997), *Lexical Competence*, MIT Press, Cambridge MA.
- MARTÍ, Luisa (2006), «Unarticulated Constituents Revisited», in *Linguistics and Philosophy*, n. 29, pp. 135-166.
- NEALE, Stephen (2007), «On Location», in O'ROURKE, M. & WASHINGTON, C. (a cura), *Situating Semantics: Essays on the Philosophy of John Perry*, MIT Press, Cambridge MA, pp. 251–393.
- PERRY, John (1986), «Thought without Representation», in *Supplementary Proceedings of the Aristotelian Society*, n. 60, pp. 137-152.
- PINKER, Stephen (2007), *The Stuff of Thought: Language as a Window into Human Nature*, Allen Lane, London.
- PUPA, Francesco & TROSETH, Erika (2011), «Syntax and Interpretation», in *Mind and Language*, n. 26, pp. 185–209.
- PUSTEJOVSKY, James (1995), *The Generative Lexicon*, MIT Press, Cambridge MA.
- RECANATI, François (2002), «Unarticulated Constituents», in *Linguistics and Philosophy*, n. 25, pp. 299-345.
- RECANATI, François (2004), *Literal Meaning*, Cambridge University Press, Cambridge.
- RECANATI, François (2010), *Truth-conditional Pragmatics*, Oxford University Press, New York.
- ROTHSCHILD, D. & SEGAL, G. (2009), «Indexical Predicates», in *Mind and Language*, n. 24, pp. 467-493.

RUMELHART, David and ORTONY, Andrew (1977), «The representation of knowledge in memory», in ANDERSON, R. C., SPIRO, R. J. & MONTAGUE, W. E. (a cura) *Schooling in the Acquisition of Knowledge*, NJ, Erlbaum, Hillsdale.

RUMELHART, David (1980), «Schemata: the building blocks of cognition», in SPIRO, R. J. et al. (a cura) *Theoretical Issues in Reading Comprehension*, NJ, Lawrence Erlbaum, Hillsdale.

SAINSBURY, Mark (2002), «Two ways to smoke a cigarette», in *Ratio*, n. 14 (4), pp. 386-406.

SEARLE, John (1980), «The Background of Meaning», in SEARLE, J., KIEFER, F. & BIERWISCH, M. (a cura) *Speech Act Theory and Pragmatics*, Riedel, Dordrecht.

SPERBER, Dan & WILSON, Deirdre (1986/1995), *Relevance*, Harvard University Press, Cambridge.

STANLEY, Jason (2000), «Context and Logical Form», in *Linguistics and Philosophy*, n. 23, pp. 391-424.

STANLEY, Jason (2002), «Making it Articulated», in *Mind & Language*, n. 17, pp. 149-168.

STANLEY, Jason & SZABÓ, Zoltan G. (2000), «On Quantifier Domain Restriction», in *Mind and Language*, n. 15, pp. 219-261.

SUNDELL, Timothy (2011), «Disagreement, Error, and an Alternative to Reference Magnetism», in *Australasian Journal of Philosophy*, DOI:10.1080/00048402.2011.614266, pp. 1-17.

SZABÓ, Zoltan G. (2001), «Adjectives in Context», in HARRISH R. & KENESEI, I. (a cura) *Perspectives on Semantics, Pragmatics, and Discourse*, John Benjamins Publishing Company, Amsterdam.

TAYLOR, Ken (2001), «Sex, Breakfast, and Descriptus Interruptus», in *Synthese* n. 128, pp. 45-61.

TAYLOR, Ken (2003), *Reference and the Rational Mind*, CSLI Publications, Stanford CA.

TRAVIS, Charles (1975), *Saying and Understanding*, Blackwell, Oxford.

TRAVIS, Charles (1985/2008), «On What is Strictly Speaking True», in *Canadian Journal of Philosophy*, n. 15, pp. 187-229, reprinted in TRAVIS (2008).

TRAVIS, Charles (1996), «Meaning's Role in Truth», in *Mind*, n. 100, pp. 451-466.

TRAVIS, Charles (1997), «Pragmatics», in HALE, B. & WRIGHT, C. (a cura) *A Companion to the Philosophy of Language*, Blackwell, Oxford.

TRAVIS, Charles (2008), *Occasion Sensitivity*, Oxford University Press, New York.