



Semantic content and compositional context-sensitivity[&]

(*Contenido semántico y sensibilidad composicional al contexto*)

Esther ROMERO*, Belén SORIA

University of Granada, Spain

ABSTRACT: A variety of theorists have recently argued against the explanation of the semantic content of a sentence as a minimal proposition claiming that intentional aspects of the context are often needed to obtain a minimal proposition. Minimalists such as Borg, however, still defend intention-insensitive minimal propositions for sentences in a narrow context and provide solutions or dissolutions against incompleteness objections. In this paper, we show that these putative defences of propositionalism do not serve to avoid some additional genuine objections which arise from compositional context-sensitivity. We aim to show that there are complex expressions which compositionally demand intention-sensitive pragmatic effects in a mandatory way and, for that reason, they provide us with evidence against the type of propositionalism that substantiates the defence of semantic minimalism.

KEYWORDS: Minimal proposition, incompleteness, propositionalism, minimalism, context-sensitivity, mandatory demand of contextual information.

RESUMEN: *Algunos teóricos han rechazado recientemente la concepción del contenido semántico de una oración como proposición mínima afirmando que para conseguir una proposición mínima a menudo se necesitan aspectos intencionales del contexto. Sin embargo, minimalistas como Borg siguen defendiendo que las oraciones en un contexto estrecho expresan proposiciones mínimas sin tener en cuenta las intenciones y lo defienden resolviendo o disolviendo las objeciones de incompletitud. En este artículo mostramos que esas supuestas defensas del proposicionalismo no sirven para evitar otras objeciones genuinas que dependen de la sensibilidad contextual composicional. Nuestro objetivo es mostrar que hay expresiones complejas que demandan composicionalmente de modo obligatorio efectos pragmáticos cuya recuperación depende de las intenciones y, por ello, proporcionan evidencia contra el tipo de proposicionalismo que fundamenta la defensa del minimalismo semántico.*

PALABRAS CLAVE: *Proposición mínima, incompletitud, proposicionalismo, minimalismo, sensibilidad contextual, demanda obligatoria de información contextual.*

[&] Research for this paper was supported by the Spanish Ministry of Economy and Competitiveness, EXCELENCIA program, project FFI2016-79317-P. We are very grateful to John Keating for suggestions on an earlier draft and to the anonymous reviewers for the valuable and insightful comments to a previous version that significantly improved the quality of our work.

* **Correspondence to:** Esther Romero. Departamento de Filosofía I. Facultad de Psicología. Universidad de Granada. Campus de Cartuja, 18011 Granada. Spain – eromero@ugr.es – <http://orcid.org/0000-0001-5685-8686>

How to cite: Romero, Esther; Soria, Belén. (2019). «Semantic content and compositional context-sensitivity»; *Theoria. An International Journal for Theory, History and Foundations of Science*, 34(1), 51-71. (<https://doi.org/10.1387/theoria.17683>).

Received: 10 March, 2017; Final version: 13 April, 2018.

ISSN 0495-4548 - eISSN 2171-679X / © 2019 UPV/EHU



This article is distributed under the terms of the
Creative Commons Attribution 4.0 International License

1. Introduction

A semantic theory must specify how semantic contents are associated to expressions by an underlying linguistic code. The linguistic code consists of a system of expression-meaning pairs and lexico-compositional rules generating such pairs for an infinite number of expressions (Sperber and Wilson 1986/1995, 13). The decoded meaning that results from lexicon and syntax alone, however, is not enough to obtain truth-evaluable content for each sentence; it cannot always fix what state of affairs should obtain for a sentence to be true. This is easy to show since natural languages have context-sensitive expressions and their contribution to literal content is only fixed relative to the context in which they are uttered. For example, (1)

(1) He is dead

does not by virtue of its encoded meaning express a proposition since the linguistic meaning of the pronoun ‘he’, an overtly context-sensitive expression, needs the context to determine its propositional contribution. When (1) is taken as input, linguistic decoding results in an incomplete proposition,¹ in semantic underdeterminate content such as (1a).

(1a) HE_x IS DEAD AT T₁²

(1a), a propositional function, is the sentence meaning expressed by (1). Thus, the result of linguistic decoding alone cannot give us propositions for all sentences. Contextual information is needed to obtain the truth-evaluable or fully propositional content. No one disputes this. What is under dispute is whether the subject matter of semantics may also be, as the traditional mainstream formal semantics claims, fully propositional content.

On one side of the debate, the subject matter of semantics is taken to be fully propositional content. Sentences express minimal contents, that is, minimal propositions or minimal truth-evaluable contents. The meaning of indexical-free sentences such as ‘Stephen Hopkins is dead’ is context-invariant and they always express the same minimal proposition. By contrast, when sentences involve context-sensitive expressions, their propositional content is necessarily affected by pragmatic effects and it varies depending on the narrow context of their utterances, a context which is able to supply “a set of objective parameters (such as world and time) and not rich, intensional aspects of the context of utterance, such as speaker beliefs or intentions” (Borg 2012, 13). The contextual influence is then limited to rules that automatically pair properties of the context with semantic properties of the expression. The content so obtained is a minimal proposition. Borg (2012, 73) calls this propositional conception of the semantic content “propositionalism”³ and considers

¹ Strictly speaking, an incomplete proposition is not a proposition. As Neale says, “[n]o proposition blueprint is itself a proposition (any more than a building blueprint is a building). Many distinct propositions (or buildings) may *satisfy* a single blueprint” (2007, 79n7).

² T₁ indicates the location in time that needs to be fixed in correlation to the tense of the verb phrase. However, we are not going to extend the explanation specifying how it is determined to focus only on the resolution of the context-sensitivity of the pronoun.

³ Bach also uses the term “propositionalism” but he defines it differently. He understands it as “the conservative dogma that every indexical-free declarative sentence expresses a proposition” (Bach 2006, 435). In Borg, the proposal is that every declarative sentence, indexical-free or not, expresses a proposition and for her it is not a dogma.

it the core tenet of standard minimalism. In a propositionalist account of (1), the meaning of ‘he’, HE_x in (1a), in a given narrow context *c*, “will contain a singular concept in subject-position, the content of which is exhausted by the object to which the speaker refers” (Borg 2012, xviii). In the case of (1), the hearer is able to think about that object under the token-reflexive description ‘the actual male person referred to by the speaker with this token of (1)’. This description includes the referential expression, ‘this token of (1)’, which refers to a particular token of the sentence (1), (1).⁴ If (1) is uttered in January 1st 2018 by Daisy talking about Morris, the hearer is able to think of Morris under the mentioned token-reflexive description since he is the content of the singular concept BEING ACTUAL MALE PERSON REFERRED TO BY THE SPEAKER WITH (1). This does not entail that the hearer is able to non-linguistically identify the referent (Borg 2012, 141). If we take the previous utterance of (1), the propositional content expressed would be (1b).

(1b) MORRIS IS DEAD AT JANUARY 1ST 2018

The propositional content of the sentence uttered is not just a propositional function like (1a) but the full singular proposition (1b) which is automatically obtained from a narrow context.⁵

On the other side of the debate, authors such as Sperber and Wilson (1986/1995), Recanati (2004 and 2010), or Bach (2006) argue that contextual information has no role to play in semantics or if it does, it cannot always fix what state of affairs should obtain for each sentence to be true. The subject matter of semantics is not always, or even for some theorists not ever,⁶ truth-evaluable content. Indeed, according to non-propositionalists this happens with (1). The personal pronoun ‘he’ underdetermines the semantic content expressed by (1) and the task of assigning a referent to eliminate its underdetermination cannot be realized without appeal to rich aspects of the context. A personal pronoun such as ‘he’ refers to the male person which happens to be the most salient in the context at hand. But “salience” is a pragmatic notion related to the speaker and her intentions (Recanati 2004, 57). If Morris is the most salient male person at hand in the context of the utterance of (1), its speaker expresses (1b) but (1b) is pragmatically delivered; it is the utterance content rather than the sentence meaning. The sentence meaning, (1a), is the semantic underdeterminate part of (1b). (1b) is the “explicit” fully determinate propositional content which is intended by the speaker with her utterance and which results from enriching (1a). This enrichment involves reference assignments for HE_x (MORRIS) and for the time of the utterance (JANUARY 1ST 2018) and the reference assignments depend on Daisy’s intentions since without appealing to them the hearer cannot know who the speaker is referring to with her use of the expression ‘he’ and

⁴ The bold type in (1) marks that it is the referent of ‘this token of (1)’.

⁵ In addition to Borg (2004 and 2012), theorists such as Kaplan (1989) and Perry (2001) are also considered propositionalists. They all accept minimal propositions but they do not characterize them in the same way. For example, while according to Borg the minimal proposition expressed by (1) would be (1b), a singular proposition, for Perry, the minimal proposition would be THE ACTUAL MALE PERSON REFERRED TO BY THE SPEAKER WITH (1) IS DEAD AT T, a reflexive proposition.

⁶ Travis’s occasionalism (2006 and 2008) illustrates the form of non-propositionalism in which the existence of semantic contents is denied in general, since the meaning of words and the nature of concepts are considered as context-variant.

thus he cannot know what state of affairs should obtain for her utterance to be true. From this perspective, it is not possible to get (1b) automatically from a narrow context.

This argument comes under one of the strategies of the non-propositionalist to reject propositionalism. As Borg says, non-propositionalists use

arguments to the effect that lexico-syntactically determined content on some or perhaps all occasions falls short of propositional content, so that in at least some cases there are no such things as the minimal propositions [standard] minimalism requires. (Borg 2012, xi)

Nevertheless, Borg thinks that they are not conclusive arguments against her view. The alleged cases in which there are no minimal propositions, according to her, depend on wrong explanations such as the one given for (1) by non-propositionalists. Propositionalists do not need to resort to salience to consider the contribution that ‘he’ can make to the minimal proposition expressed by (1), (1b), as its propositionalist explanation illustrates. The minimal truth-evaluable content for sentences that involve lexical context-sensitivity can be delivered without appeal to rich aspects of the context. For other types of problem cases, propositionalism has, according to Borg, “a wider arsenal of defensive weapons available to it than is sometimes supposed” (2012, xiii).

In this paper, by contrast, we present new arguments in support of the position that semantic content falls short of propositional content and thus against propositionalism. We are going to take into account certain types of cases of what we call “compositional context-sensitivity”. These are examples of syntactically well-formed sentences which do not get fully propositional content from lexico-syntactic information plus narrow context alone. Two types of examples illustrate this. First, sentences such as ‘The burglar nightmare was over’ which include a noun-noun construction, ‘burglar nightmare’ in this case. This noun-noun construction demands a contextual provision of the relation between burglar and nightmare without which no proposition is expressed. Second, sentences such as ‘The ham sandwich is waiting for her check’ show lack of semantic coordination between some of their semantic constituents. In this case, there is a semantic mismatch between the meaning of the NP, ‘the ham sandwich’ and the meaning of the predicate, ‘is waiting’ and between ‘her’ and its antecedent ‘the ham sandwich’. Thus, unless some pragmatic adjustment affects one or several semantic constituents of the sentence uttered, composition is not possible. An exploration of examples like these allows us to argue that, even if we accepted all propositionalists’ “defensive weapons”, they are not wide enough to provide us with adequate explanations for all problem cases.

The rest of the paper has the following structure. In section 2, we consider in what terms the debate about the nature of semantic content of a sentence can be better understood. To explain that, we look at different ways in which contextual information may be demanded to finally highlight that the crucial point of disagreement in this debate is whether truth-evaluable content can be delivered without appeal to rich aspects of the context or not. Problem cases for propositionalism will be more clearly understood taking into account those different ways. In section 3, we will revise the arguments used by Borg in her attempt to preserve propositionalism against some problem cases. In section 4, we argue that the cases of compositional context-sensitivity, introduced in section 2, constitute a challenge to propositionalism which cannot be met by Borg’s standard minimalism. We will argue that some of them express incomplete propositions and that, in other cases,

the composition of meaning is not possible. We support the latter with some experimental data available and with evidence delivered by examples of anaphoric binding in metaphorical or metonymical utterances. Finally, we summarise our arguments and examine the consequences of our proposals and their effects on minimal propositions.

2. *Propositionalism and mandatory demands of contextual information*

To appreciate more clearly in what respects authors from different positions genuinely agree or disagree with standard minimalism and its propositionalism, in section 2.1 we frame the debate by considering the different types of demands of contextual information to obtain propositions.⁷ Since, as we show, the potential acceptance of optional demands is not the crucial point in the debate on propositionalism, we focus, in section 2.2, on mandatory demands to establish a more fine-grained distinction, not only between truth-conditional and linguistic mandatory demands for contextual information, but also between lexically and compositionally mandatory linguistic demands (Romero and Soria 2013a, 162-68). Using these distinctions, we characterize the problem cases for propositionalists in section 2.3. Some of the mandatory demands triggered by the problem cases are truth-conditional and linguistic and some are only truth-conditional. This characterization will let us add other types of examples that are not usual in this debate, examples of compositionally mandatory linguistic demands of contextual information.

2.1. THE CURRENT DEBATE ON PROPOSITIONALISM

The most important difference between minimalists (of any kind) and contextualists is that the former do not accept optional demands of contextual information to get the proposition explicitly expressed by the speaker. Contextualists argue that the contextual effects that are not triggered by lexico-syntactic properties of expressions may appear in the truth-conditional content explicitly expressed by the speaker; they are contextual effects optionally demanded by the utterance. In a non-literal utterance of (2),

- (2) There is a lion in the middle of the piazza

contextualists argue, the propositional content communicated by the speaker would be THERE IS A STATUE OF A LION IN THE MIDDLE OF THE PIAZZA, propositional content which includes a modulated subpropositional content for 'lion' (Recanati 2010, 14). The demand of this content is optional because it is not needed to obtain the minimal proposition expressed with (2) by means of its lexico-syntactic information, to wit, THERE IS A LION IN THE MIDDLE OF THE PIAZZA.

As optional demands are demands of contextual information not needed to get a minimal proposition, nothing else needs to be said about them in the debate on propositional-

⁷ Although it is usual to distinguish between mandatory and optional subpropositional processes (see Recanati 1993, 2004 and 2010), we have argued in a previous work that it is not adequate to characterize every process of interpretation other than saturation as optional. Processes of modulation, for example, may have mandatory demands (Romero and Soria 2013a). That is the reason why we talk about mandatory/optional demands and not about mandatory/optional processes.

ism. By contrast, in our opinion, mandatory demands are central to this debate since even though they are generally accepted for overtly context-sensitive expressions, scholars do not agree on the types of mandatory demands and their characterization. Indeed, while standard minimalism defends that mandatory demands of contextual information can always be automatically resolved to get the proposition expressed by the sentence relative to narrow context, non-propositionalist accounts hold that the contextual information mandatorily demanded cannot be always automatically recovered just by appeal to narrow context. One of the ways some non-propositionalists justify this is their defence of the proposition explicitly expressed as an aspect of speaker meaning. For them, the proposition explicitly expressed is intended by the speaker and this determines their claim that intention-insensitive contextual information is often not enough to obtain the minimal proposition. The semantic content of the sentence would be non-propositional if what semantics is taken to deliver is an aspect of speaker meaning. In non-standard minimalism such as Stanley's (2000 and 2005), the intended proposition explicitly expressed is a minimal proposition obtained only by the resolution of mandatory demands of contextual information. As these resolutions are made taking into account intention-sensitive contextual information, the minimal proposition corresponds to the intuitive truth-conditions of the utterance and it is included in the speaker's meaning. In this way, some non-propositionalists such as Stanley can also be called "minimalists".⁸ By contrast, if what semantics is taken to deliver is not an aspect of speaker meaning, the semantic content does not need to coincide with or be a part of the proposition intentionally communicated by the speaker. As Bach, a recognized non-propositionalist, states:

This notion [the semantic content] pertains to the character of the information available to the hearer in the process of identifying what the speaker is communicating, not to how that information is exploited (...). (Bach 2001a, 157 and Bach 2001b, 25)

In this line, Bach (1994) accepts that semantic propositional content may be obtained in some cases from lexico-syntactic information plus narrow context alone (a theoretical possibility when a pure indexical is involved) but he does not accept this is possible in all cases. In this way, even though standard minimalism coincides with Bach's proposal that what semantics delivers does not have to be an aspect of speaker meaning, Bach does not defend propositionalism. Like Bach, Stanley and Recanati, we also argue that mandatory demands of contextual information cannot be automatically resolved to get the proposition expressed by the sentence relative to narrow context and thus we oppose the standard

⁸ Despite what some theorists have argued (see, for example, Borg 2012 or Cappelen and Lepore 2005), to deny that the semantic content expressed by a sentence is propositional is not automatically to become a contextualist. To be a contextualist also requires accepting the possibility of optional demands of contextual effects on what is said by an utterance. In this way, Stanley is a non-propositionalist that cannot be catalogued as contextualist but as indexicalist since he rejects optional demands of contextual effects on truth-conditional content (Recanati 2010, 13n3). His indexicalism is called "minimalism" due to his defence of a minimal contextual influence which is linguistically demanded by means of context-sensitive expressions. However, his position differs from standard minimalism in accepting speakers intentions as a guide in the determination of the proposition expressed; his minimal propositions are related to what the speaker says and not to what the sentence says (Stanley 2000 and 2005).

minimalist's defence that the minimal proposition serves to fix the truth-evaluable content of the sentence without appeal to rich aspects of the context.

2.2. MANDATORY DEMANDS OF CONTEXTUAL INFORMATION

Standard minimalism depends on the following assumptions:

- (i) that the contextual influence on the proposition explicitly expressed is *always* demanded mandatorily
- (ii) that *all* mandatory demands of contextual information are traced to a lexico-syntactic item.
- (iii) that *all* mandatory demands must be resolved automatically from a narrow context.

There may be different types of attacks on these claims. Against (i), it can be argued that the demand of contextual information is not always mandatory (there may be optional demands). Nevertheless, we have already argued that the rejection of (i) is not the crucial point in the debate on propositionalism. Thus, we are going to focus on why (ii)-(iii) should be rejected taking into account different types of mandatory demands of contextual information. Against (ii), it can be argued that mandatory demands are not always triggered by some lexico-syntactic item. On the one hand, mandatory demands may be non-linguistic and on the other, linguistically mandatory demands may be triggered by compositionality. This typology permits us to go against (iii) since, once the types of mandatory demands of contextual information are extended, it is more difficult to argue that all can be resolved automatically from a narrow context.

When the linguistic meaning of a well-formed sentence is not enough to get a proposition, a truth-evaluable content, contextual information is demanded obligatorily. This gives us a truth-conditional characterization of *mandatory*:

Mandatory_T

A pragmatic effect is mandatory when it is required to get a proposition, content evaluable from a truth-conditional point of view.

Pragmatic effects are only triggered as something indispensable for the expression of a determinate propositional content, that is, as something indispensable for content to be evaluable.

Contextual information may also be demanded by the linguistic properties of expressions. Being linguistically mandated in virtue of lexical or syntactic properties of the expression type, pragmatic effects have to occur on all occasions on which a given expression is felicitously used. This gives us a linguistic characterization of *mandatory*:

Mandatory_L

If a pragmatic effect is needed in virtue of lexical or syntactic properties of the expression type, it is, from a linguistic point of view, mandatory.

The linguistic criterion for “mandatory” elaborated by many theorists intends to include the truth-conditional criterion since if linguistic meaning requires certain contextual in-

formation and this is not considered, then, there would not be a complete propositional content. The linguistic demands are also truth-conditional, they are mandatory_{LT}. For example, in (1) the demand of contextual information is mandatory_{LT}. It is mandatory_L since there is a context-sensitive expression, ‘he’, demanding contextual information by its lexical properties. It is also mandatory_T because, without the contextual information, what is said by (1), (1a), does not fix truth-conditions that allow its evaluation.⁹

Conversely, the truth-conditional criterion tends to include the linguistic one since when a pragmatic effect is required to get a proposition it must in fact be traceable to something in the syntax (Stanley 2000, 391; Borg 2012, 66). Indeed, some of the more emblematic problem cases that have been introduced in the discussion as mandatory_T have consistently been also taken as mandatory_L. We are referring to Bach’s cases of completion for which according to him there is no linguistic trigger (see his explanation of (4)-(7) below). However, many authors argue that they are not cases of completion but of covert context-sensitivity (Stanley 2000; Recanati 2010). Both alternative ways of explaining them, nevertheless, are not options for propositionalists. Considering them as cases of completion, as Bach does, entails denying propositionalism even for context-insensitive sentences. Considering them as cases of covert context-sensitivity, as Stanley or Recanati do, also comes at a cost: not all mandatory demands can be resolved automatically from a narrow context and not all mandatory demands are always traced to a lexical item; mandatory_L demands may arise lexically or compositionally.

The propositionalist also thinks these two criteria for mandatoriness are coextensive although she only admits, as we show in section 3, that there are lexical mandatory_{LT} demands. Only these cases can be explained taking into account narrow context. This compels her to provide alternative explanations for the additional challenging cases that are shown below.

2.3. PROBLEM CASES

Example (1) was used in the Introduction to show one of the problem cases for propositionalism. In (1), there is a mandatory_{LT} demand of contextual information, as we have just seen, and non-propositionalists argue that this demand appeals to rich aspects of the context. Another example in which the demand to reach propositional contents is mandatory_{LT} is (3).

(3) That is red

‘That’ belongs to the same category as ‘he’, they both are context-sensitive expressions. The minimal proposition related to (3) cannot be obtained without appeal to speaker’s referen-

⁹ However, not every linguistic demand has to be truth-conditional. Conventional implicatures and utterance modifiers serve to show this (Romero and Soria 2013a, 166-68). For example, the meaning of ‘but’ sets up a slot to be saturated by a proposition stating that the conclusion supported by the first conjunct is refuted by the second. Thus, the sentence ‘He is rich but stupid’ expresses the proposition that the person in question is both rich and stupid and linguistically conveys as a conventional implicature that his being intelligent given his richness is refuted by his unexpected stupidity. Only the first proposition determines the truth-evaluable content of the sentence. Saturation of the propositional variable is linguistically mandated but its resolution is not part of the propositional content of the sentence (the demand is then mandatory_L but not mandatory_T).

tial intentions. However, the propositionalist opposes non-propositionalism by the use of token-reflexive descriptions to get the minimal proposition for examples such as (1) and (3).

In addition, indexical-free declarative sentences such as (4)-(6)

- (4) Jill went to a local bar
- (5) John is coming
- (6) Flintoff is ready

have often been used by non-propositionalists to argue that we cannot attribute truth or falsity to the claims they express without appeal to rich aspects of the context. (4) cannot express a complete proposition without knowing with respect to whom the bar is local. (5) cannot express a complete proposition unless a place John is coming to or from is established. (6) does not deliver a proposition until we know what Flintoff is ready for. (4)-(6) demand truth-conditionally contextual information and thus they are considered cases of incompleteness. In particular, examples such as (4)-(6) are cases of what Bach calls “semantically underdeterminate sentences” (1994, 133). Their sentence meanings are propositional radicals, syntactically complete forms that lack determinate truth-conditions; they are semantically incomplete (Bach 2000, 263n3). For Bach, these expressions do not linguistically trigger contextual information. They only truth-conditionally trigger a pragmatic process of global completion to recover a conceptual portion needed to get a full proposition. Their demand of contextual information is only mandatory_T.

Similarly, the examples that involve a noun-noun construction can be used to show that a sentence including a noun-noun construction does not express a complete proposition if the relation between the nouns is not established. A sentence such as (7)

- (7) The burglar nightmare was over

does not express a complete proposition unless the content of the complex expression ‘burglar nightmare’ is pragmatically fixed through the contextual provision of a relevant relation between burglar and nightmare. There is a mandatory_T demand of contextual information to determine the relation. Examples such as ‘burglar nightmare’ are cases of what Bach calls “semantic underdetermination at a phrasal level” (1994, 150). For him, certain sorts of phrases such as adjective-noun (e.g. ‘happy days’) and noun-noun phrases (e.g. ‘child abuse’) are underdeterminate phrases that need filling in. These expressions truth-conditionally trigger a pragmatic process of local completion.

Bach admits that underdetermination may arise in sentences, examples (4)-(6), or in phrases, example (7), although their constituents (words) are not context-sensitive lexical expressions; they all trigger non-linguistically and truth-conditionally pragmatic effects and are used by Bach to show that indexical-free declarative sentences cannot express full propositions (see note 3 above).

Once we admit that (7) demands contextual information truth-conditionally, it is easy to see that there are other examples that demand contextual information in that way. Let’s consider sentence (8).

- (8) The ham sandwich is waiting for her check

(8) does not express a literal minimal proposition nor does it fix literal truth-evaluable content since, without a pragmatic adjustment and simply in virtue of the standing meaning of words, we do not know what the world would have to be like for the content expressed by

(8) to obtain. Recanati (2013, 177) accepts that (8) is a case of compositional modulation and he says that “cases of compositional modulation are mandatory_T”.

As we have said in section 2.2, many theorists think the truth-conditional criterion for “mandatory” includes the linguistic criterion. For them, if in examples (4)-(8) the demand of contextual information is mandatory_T, it must also be mandatory_L. They have to be examples of covert context-sensitivity. They are not indexical-free declarative sentences. They mandate the pragmatic process of saturation.

In this way, ‘local’ in (4), ‘come’ in (5) and ‘ready’ in (6) may be considered as lexical items associated with covert variables in the syntax (Stanley 2000). In these cases, there is a mandatory_L demand of contextual information due to the meaning of the lexical item.

(7) has also been considered a case in which covert variables in the syntax appear but the mandatory_L demand is due to a particular construction. It is an example of what Recanati (2010, 37n4) calls “constructional context-sensitivity” which is different from the lexical one since in ‘burglar nightmare’ there is no articulated expression that stands for the relation needed between burglar and nightmare. In every case of noun-noun construction there is a mandatory_L demand of contextual information. It is linguistically mandated by the attempt at combining two expressions to get a more complex one. In this sense, this is a compositionally mandatory_L demand. In order to get the semantic content of (7), we need to assign a value to the covert variable that linguistically (or constructionally) mandates the pragmatic process of saturation of the relation that nightmare bears to burglar.

Once we admit that there is a compositional mandatory_L demand by a syntactic rather than merely lexical form, we may also claim that examples such as (8) demand contextual information not only truth-conditionally (to get the composition of the propositional content) but also linguistically. The demand of contextual information arises compositionally due to the lack of semantic coordination between its semantic parts, between the meaning of the NP, ‘the ham sandwich’, and the meaning of the predicate, ‘is waiting for her check’. Furthermore, there is no agreement between the anaphoric pronoun ‘her’ and the subject. The NP as subject of ‘is waiting’ should express “a property of beings, not one of culinary objects” (Sag 1981, 285). Since there is no element in (8) with the feature [+ANIMATE BEING] to get such a thematic role for the subject, the composition of the meanings of the NP and the predicate is not possible. No resulting meaning is available to obtain a proposition with both of them as constituents. Unless either the subject or the predicate takes on a non-literal meaning, no proposition is obtained and thus there is a mandatory_{LT} demand. Stern (2006 and 2011) considers examples of this type as cases that include covert variables which have to be saturated to allow composition.

Using our more fine-grained distinction of mandatory demands of contextual information, we classify, in Table 1, the different types of examples of linguistic underdetermination, which according to non-propositionalists may be taken as problem cases for standard minimalism.

Of these three kinds of examples, the first (lexical mandatory_{LT}) are examples in which there are linguistic demands of contextual information and the linguistic demands are signal-driven by the lexical properties of the expression (examples (1) and (3)). Everyone agrees that they are context-sensitive expressions. By contrast, there is no consensus (indicated with “-/+” in Table 1) on whether the second and third set of examples, examples (4)-(6) and (7)-(8), truth-conditionally and/or linguistically demand contextual information. Authors such as Bach believe that in examples (4)-(7) the demand is only

mandatory_T. Many non-propositionalists believe that it is also mandatory_L. With respect to (8), Recanati (2013) thinks it is just mandatory_T while authors such as Sag, Stern or we ourselves maintain it is mandatory_L_T. Those who defend the mandatory_L character of examples (4)-(8) also consider them as context-sensitive expressions. This is not, as we will come to see in the next section, the position of standard minimalism.

Table 1

Mandatory _L		Mandatory _T	Examples of problem cases for standard minimalism
Lexical	Compositional		
+	-	+	(1) He is dead (3) That is red
-/+	-	-/+	(4) Jill went to a local bar (5) John is coming (6) Flintoff is ready
-	-/+	-/+	(7) The burglar nightmare was over (8) The ham sandwich is waiting for her check

3. Borg's minimalist approach to problem cases

The position of a standard minimalist such as Borg with respect to (1) and (3)-(8) may be condensed in the following. The examples of the first type of Table 1 express full propositional content in the way explained using (1) in the Introduction. Her line of argument for problem cases of the second type is twofold. On the one hand, she groups examples such as (4) with the first type of examples, examples of genuine context-sensitivity. On the other, she rejects that examples such as (5)-(6) require any kind of pragmatic resolution. (5)-(6) are understood as cases including a context-insensitive covert syntactic structure. They do not demand contextual information. Problem cases of the last type are not recognized as such by propositionalists either. Let us see this in detail.

The problem raised by examples such as (1) and (3) is that they include words that are marked at the lexical level as *overtly* context-sensitive expressions and, according to non-propositionalists, their contribution to the minimal proposition depend on wide context. Against this, the minimalist argues that in the case of (1), the hearer is able to think about Morris under the token-reflexive description 'the actual male person referred to by the speaker with this token of (1)' and narrow context is enough to automatically get the proposition expressed by (1), (1b). In the case of (3),

(3) That is red

the semantic content a hearer should entertain will contain a singular concept in subject-position whose content is exhausted by the object to which the speaker refers in a given context. All that is required is that the hearer be able to think about that object under the token-reflexive description 'the actual object referred to by the speaker with this token of (3)'. By admitting the token-reflexive description as what allows thought of the referential constituent of the minimal proposition without appeal to wide context, Borg thinks she

can avoid the non-propositionalist objection. Examples of the first type in Table 1 express full propositional content without appeal to speaker's intentions.

A different problem is the one raised by examples such as (4)-(6), the second type of examples in Table 1. Borg (2012) follows two different lines of attack on the underdetermination arguments used by her opponents in such cases. On the one hand, putatively incomplete expressions such as 'local' in (4) are in her view genuinely context-sensitive elements and they should be treated like 'he' in (1) or 'this' in (3). In (4) the demand of contextual information from narrow context is mandatory_{LT}. In her words:

there are reasons to think that, on reflection, ordinary subjects *do* respond to words like 'local' and 'left' in just the same way that they respond to 'this' and 'that', treating them as having a lexical meaning which is genuinely context-sensitive. (Borg 2012, 89-90)

On the other hand, she explains that intuitive judgements of incompleteness by language users on examples such as (5) and (6) are misplaced (2012, 103). She denies that "the putatively problematic cases are really problematic at all" (Borg 2012, 111). The problems of incompleteness are just apparent. In her view, the intuitions of incompleteness apparently emerge around this kind of well-formed sentences from some overlooked context-insensitive covert syntactic structure. The propositional semantic content expressed by (5) would be JOHN IS COMING SOMEWHERE. (5) involves a hidden context-insensitive syntax. The standard minimalist concedes that, in cases such as (5), there are syntactically realized but phonetically null elements (Borg 2012, 19). In this way, there is no mandatory demand of contextual information in (5). A similar explanation is offered for (6), where 'ready' is a context-insensitive expression whose contribution to the logical form of the sentence is more complicated than might initially have been thought by only looking at the vocalized material (Borg 2012, 214). Following organizational lexical semantics (OLS) to account for how words may be appropriately concatenated, Borg claims that (6), a case of incompleteness for non-propositionalists, might be treated as expressing the full proposition that THERE IS SOMETHING FOR WHICH FLINTOFF IS READY since this example has the underlying logical form ' $\exists x$ Ready $\langle f, x \rangle$ '. In her words:

It is this which explains the apparent sense of incompleteness that subjects experience given the sentence 'Flintoff is ready', produced with no supporting context. On the current model, the sense of incompleteness is explained by the fact that 'ready' is grouped within the lexicon with other two-place expressions, thus hearers tacitly recognize that the vocalized material fails to mark all the argument places associated with the terms in the sentence. It is this recognition of a disparity between vocalized constituents and the arguments to be found at the level of logical form which results in our sense of incompleteness. (Borg 2012, 203)

This *sense* of incompleteness, however, does not lead her to claim that judgements of speech act content must be included in the proposition expressed because the logical form ' $\exists x$ Ready $\langle f, x \rangle$ ' is part of the encoded meaning of the expression 'ready'.

Let's now turn to examples such as (7) and (8).

- (7) The burglar nightmare was over
- (8) The ham sandwich is waiting for her check

(7) is an example in which the underdetermination of linguistic meaning appears at local level by a semantically underdeterminate phrase. Local completion, Bach (1994, 152) says,

is achieved by insertion of the missing conceptual portion. As we have just shown, to address the challenge raised by (4)-(6), Borg claims that their incompleteness emerges either from a genuine case of overt context-sensitivity (example (4)) or from some overlooked context-insensitive covert syntactic structure (examples (5) and (6)) where incompleteness is just apparent. Does one of these explanations serve to explain (7)? Is (7) a genuine case of overt context-sensitivity? Is it a case of covert context-insensitivity? Standard minimalists have not given any answer but we think that these questions would probably receive a negative answer. On the one hand, (7) cannot be considered as a case of context-sensitivity as in (1), (3)-(4) since there is no context-sensitive lexical item in (7). On the other, there is no word in (7) that can be grouped with an expression demanding a covert context-insensitive structure as it is the case of the use of 'coming' in (5) or 'ready' in (6). Nevertheless, Borg might claim that it is the noun-noun construction itself that marks 'burglar nightmare' as a covert context-insensitive structure and that (7) means something like *WHAT-EVER THE RELATION BETWEEN BURGLAR AND NIGHTMARE DENOTES, THE BURGLAR NIGHTMARE IS OVER*.¹⁰ (7) would not be a case of underdetermination after all and thus there would be no mandatory demand of contextual information.

What about (8)? The problem we raised for (8) is not considered by Borg either. For us, no literal reading is possible for (8) because the phrase 'the ham sandwich' cannot contribute to the semantic content just by appeal to its linguistic meaning and narrow context. In this case, however, we may resort to Borg's account on metaphor to consider what she might say. Let's consider the following quotations.

Metaphor remains unique due to the special behaviour of the figurative interpretation function *f*, which takes us from a proposition literally expressed to an entirely different proposition via established non-semantic, conceptual relations [...]. (Borg 2001, 245)

And she adds that her approach

agrees with the pragmatist that the formal theory yields something like a 'minimal proposition', and that there is then some kind of 'moving on' from this minimal proposition to some further conveyed proposition. Both the CC ["Conceptual Connection"] and the pragmatist accounts thus see literal and metaphorical interpretations as existing side by side, allowing interlocutors to switch between literal and metaphorical readings. (Borg 2001, 246)

If we take this into account, we can assume that she would claim that (8) is not a semantically underdeterminate sentence. Indeed, she argues for a theory of metaphor which presupposes a literal reading of sentences; sentences that express (obviously) false literal propositions. Borg's explanation of metaphor rests on the unargued assumption that literal and metaphorical propositions exist side by side. Other authors do provide arguments for a defence of a literal proposition for non-literal sentences. Stanley (2005, 231) uses example (9),

- (9) a. [A:] The ham sandwich is getting annoyed.
b. [B:] That's absurd; sandwiches do not get annoyed.

to claim that B's reply provides evidence that the sentence uttered by A expresses an absurd proposition. If Borg gave an explanation in this vein, she could claim that there is no under-

¹⁰ We are thankful to one of our reviewers for bringing this point to our attention.

determination in (8). The problems of non-literal uses would be just apparent for propositionalists and the literal semantic content expressed by (8) would be a full proposition.

From all this, we can conclude that Borg argues that (1) and (3)-(4) are genuine cases of overt context-sensitivity and that (5)-(7) are wrongly conceived as cases of incompleteness from misplaced intuitions while they really are examples including a context-insensitive covert syntactic structure. In addition, we can assume that, for her, (8)-(9a) express literal propositions even if they are obviously false or absurd. Thus, as shown in Table 2, in minimal semantics the cases of underdetermination can be simplified.

Table 2

Mandatory _L (Lexical)	Mandatory _T	Examples
+	+	(1) He is dead (3) That is red (4) Jill went to a local bar

Borg's explanations (potential or explicit) to solve or dissolve the problems posed by examples (4)-(8) show that in her propositionalist account the two types of mandatory demand previously mentioned in section 2.2 are coextensive and affects only (1) and (3)-(4).

However, we have given in section 2.2 reasons to claim that the problem cases of the last type, examples (7) and (8), have to be included as cases of compositional context-sensitivity. We argue in section 4 that Borg's alleged solution for (7) cannot be used to dissolve the problem raised for this example and that her theory of non-literal examples is not adequate for an explanation of (8) or (9a). Standard minimalism does not really have an alternative explanation for these examples as it does for (1), (3)-(6). (7) and (8)-(9a) are examples in which, according to us, there are linguistic demands compositionally-driven by the combinatorial properties of complex expressions and this context-sensitivity is, as we will come to see in section 4, as unavoidable as lexical context-sensitivity is in examples like (1) and (3)-(4). Their context-sensitivity, however, cannot be resolved in the same way, by means of a token-reflexive description. Instead, their resolution depends on some non-automatic pragmatic process such as modulation or local supplementation.

4. Additional evidence against propositionalism: compositional context-sensitivity

Let's assume that Borg claims it is the noun-noun construction itself that marks 'burglar nightmare' as a covert context-insensitive structure and that the information available to the hearer for a noun-noun construction is always *WHATEVER THE RELATION BETWEEN N AND N DENOTES, THE NN (...)*. However, we find it implausible to hold that (7) can be understood as expressing something like *WHATEVER THE RELATION BETWEEN BURGLAR AND NIGHTMARE DENOTES, THE BURGLAR NIGHTMARE IS OVER* and that this is a full proposition.

The problem of this proposal is that establishing any relation between two common nouns does not allow us to fix a complex concept as it is required for the description (Sag 1981, 288-89). It could be argued that (7) expresses a general proposition which fixes the

following truth-conditions: the unique satisfier of the predicate ‘is a burglar nightmare whatever the relation between burglar and nightmare denotes’ also satisfies the predicate ‘is over’. Nevertheless, without specifying the relation of burglar with nightmare, the meaning of ‘the burglar nightmare’ in a given narrow context will not denote a concept of nightmare constrained by the meaning of ‘burglar’ in a determinate way that allows the hearer to grasp the condition encoded by the complex description. The restrictive modifier cannot constrain the denotation of ‘nightmare’ and thus ‘burglar’ is not performing its linguistic task. The content of the description does not get fixed. Thus what semantics delivers for a sentence such as (7) will not be something capable of truth evaluation, something the hearer can think of. If this is so, the content of the minimal proposition is not graspable. Rather, it is merely a succession of propositional constituents that has not admitted semantic composition since some subpropositional component of content (the relation) is missing.

Let’s now consider (8) and (9a), the other type of examples in which underdetermination of a complex expression appears. In this case, Borg can reject context-sensitivity claiming that there is a minimal proposition expressed by (8) which is obviously or trivially false (and thus inappropriate) or, as Stanley says for (9a), absurd. However, as we will come to see, this cannot be argued. Indeed, we are going to show that sentences such as (8) or (9a) do not express literal propositions because they lack semantic coordination. We support this claim with some experimental data available and with evidence delivered by examples of anaphoric binding in metaphorical or metonymical utterances.

In our opinion, (9b) does not prove that there is a literal proposition. That sandwiches do not get annoyed is just a metalinguistic negation and the absurdity, which we prefer to call “abnormality” (Romero and Soria 2016, 157), arises in these cases precisely out of lack of semantic coordination. The lack of semantic coordination between its semantic parts indicates that (9a) is semantically ill-formed. When (9a) is said to express an obviously false or absurd proposition, “obviously false” and “absurd” do not oppose “true”, they oppose “semantically well-formed” and, this is a clear indication that there is no literal proposition (Romero and Soria 2013b, 46).

The absurdity or abnormality generated by the lack of semantic coordination between the semantic parts of (9a) blocks entertainment of a literal reading. Lack of semantic coordination indicates linguistically that there is no literal proposition available and that a pragmatic adjustment of at least one of the semantic parts is expected. Since a sandwich cannot saturate the argument slot for an animate being required by the predicate ‘is getting annoyed’, the hearer will resort to any relevant information from rich aspects of the context in order to saturate the argument slot with relevant information, guided by his attempt to get what the speaker intends to convey.

The demand of contextual information is not only mandatory_L and arises compositionally due to lack of semantic coordination, it is also mandatory_T. Without some pragmatic adjustment, the context-insensitive parts of (9a) are decoded into semantic content that, nevertheless, does not determine an evaluable content. The semantic content of (9a) does not provide us with the information to know what the world (real or fictional) would have to be like for the content expressed by the sentence to obtain. A ham sandwich cannot literally get annoyed unless the linguistic meaning of ‘ham sandwich’ is adjusted to fit the requirements of the predication. To make (9a) interpretable, some pragmatic adjustment is needed. For example, ‘ham sandwich’ may change its denotation from an inanimate entity to an animate one. However, this is already an adjustment of the linguistic meaning

of ‘ham sandwich’ since its contribution to the proposition would not be made by its linguistic meaning (two slices of bread with a layer of ham) but by its pragmatically derived fictional ad hoc concept (two slices of bread with a layer of ham capable of being sentient and experience annoyance). No meaning is available as the result of the composition of the conventional lexical meanings of its constituents. The semantic content of (9a) cannot be a proposition; it cannot be grasped without appealing to rich aspects of the context.

As it happens in (8) and (9a), (10)

(10) The wilting violet left the room

shows lack of semantic coordination between its semantic parts. As far as our linguistic competence is concerned, this predicate cannot make its semantic contribution to the clause since its meaning is the type of action that typically needs an animate agent to fill in the semantic role of its subject, something that the flower is not. Even if syntactically speaking ‘the wilting violet’ is the subject of (10), semantically speaking, ‘the wilting violet’ does not coordinate with the predicate. It is not possible to think about the facts of the matter in the world that can be a flower literally leaving the room. (10) does not have the minimal level of meaningfulness to express a full literal proposition. Unless some expressions take on some non-literal meanings depending on the context (metonymical, metaphorical or even fictional), no proposition is obtained.

The lack of semantic coordination in (10) compositionally demands a pragmatic process even if the type of process and the content cannot be specified without taking into account a particular utterance of (10). The NP in subject position in (10) may be used metonymically to refer to a woman wearing a wilting violet on her sleeve and thus ‘the wilting violet’ has to be metonymically interpreted by means of a pragmatic operation of supplementation of conceptual material (Romero and Soria 2013c, 150). Or it may be used to refer to a woman described metaphorically as a wilting violet and thus it has to be metaphorically interpreted by means of a pragmatic resolution of transfer (Romero and Soria 2013c, 150). Or it may be used to talk about a fictional wilting violet in a fairy tale and thus it has to be interpreted as a fictional animated violet. The selection of one of these potential types of interpretations cannot be elucidated without appeal to the intentions of the speaker and thus different pragmatic processes may be demanded to express a complete proposition by means of the same sentence.¹¹ The semantic mismatch triggers the search of subpropositional content that eventually allows the composition, and it is the job of pragmatics to supply the specific conceptual addition or modulation to get the determinate truth-conditions in the interpretation of (10) in its context of utterance. When there is lack of semantic coordination, a pragmatic adjustment is ineliminable both linguistically and truth-conditionally;¹² its demand is not pragmatically but semantically constrained. However,

¹¹ Lack of semantic coordination is not always a signal of a covert variable whose saturation allows composition as Stern (2006 and 2011) would argue. Compositionally mandatory_L demands do not always have to follow the pragmatic operation of saturation of a variable as in Recanati’s explanation of the noun-noun cases. Different pragmatic strategies can be mandatorily demanded: not only saturation but also cases of transfer and supplementation (Romero and Soria 2013a, 165).

¹² Modulation processes often have a linguistically mandatory demand and more often than not this is the case of metaphor and metonymy. It is true that not all the metaphorical or metonymical utterances include a sentence that shows lack of semantic coordination (see example (2) in this paper), but most cases do.

the effect of the resolution of semantic compositional infelicity cannot be treated as part of semantics (it is the demand rather than the contextual effects that is semantic). We do not know what the world would have to be like simply in virtue of the standing meaning of the words in (10) relative to the narrow context. What semantics delivers for a sentence such as (10) will not be something capable of truth evaluation. (10) is an indexical-free and yet compositionally context-sensitive expression.

To back our claim that examples including some lack of semantic coordination do not express minimal propositions, we can resort to experimental evidence. For example, an experiment run by Giora et al. shows that “outside a supportive context, participants with AS [Asperger Syndrome] did not invest in processing novel metaphors but rather dismissed them as meaningless” (2012, 42). This can be taken as evidence that a literal reading without appeal to context is not possible for an expression when there is lack of semantic coordination since “Asperger’s Syndrome (AS) involves difficulties in social communication but no delays in language or cognitive development” (Giora et al. 2012, 22). Interpretation of complex expressions when there are “incompatible meanings” (Giora et al. 2012, 41) is considered as meaningless by participants with AS as well as by many, but not all, of the participants in the comparison group. We can hypothesize that lack of semantic coordination is the reason why the participant with AS cannot conceive (10) as meaningful. When some participants in the comparison group consider them interpretable, they do only by the provision of a potential non-literal context by appeal to their better abilities in social communication. Such a participant in the comparison group might entertain a possible appropriate figurative or fictional context to make it interpretable, that is, intelligible.

Another more specific experimental work designed to test semantic integration also shows that, for AS participants, “the effort invested in novel metaphor comprehension is similar to that required for processing unrelated, nonsensical word combinations” (Gold and Faust 2012, 62). If participants with AS, who are proficient in literal interpretation, group novel metaphorical expressions together with nonsensical word combinations, we can take it as evidence that it is not possible for a hearer to entertain the literal truth-conditional contribution of an expression that lacks semantic coordination.¹³

These experimental data are not the only type of evidence to claim that lack of semantic coordination precludes literal readings and thus, minimal propositions. The intra-linguistic task of anaphoric binding in metaphorical or metonymical utterances also gives us reasons to support it. If we argue that the intra-linguistic task of anaphoric binding involves agreement, which we can assume to be one of the constraints included in Borg’s “organizational lexical semantics” (2012, 166), it is not possible to claim that (11)

(11) The wilting violet forgot her purse when she left the room

¹³ These experiments show that for both groups interpreting novel items (whether literal, e.g. ‘Tverian horse’ or metaphorical, e.g. ‘Dying Star’) is costly and error-prone compared to interpreting familiar ones when supportive context is provided. Both invest more time to respond to novel literals and novel metaphor. Outside a supportive context, however, adults with AS did not take longer to respond to novel metaphors while typically developing adults did. Furthermore, the time invested in novel metaphor comprehension for AS participants is similar to that required to dismiss nonsensical word combinations (e.g. ‘bunny laundry’) as meaningless. This can be taken as evidence that, in these cases, adults with AS did not invest in processing novel metaphors.

expresses a false proposition. Without the sub-propositional intention-sensitive pragmatic adjustment in each of the possible biasing contexts (metaphorical, metonymical or fictional), the intra-linguistic task of binding the pronouns ‘her’ and ‘she’ to their antecedent ‘the wilting violet’ is not possible due to lack of agreement. Indeed, if ‘the wilting violet’ were metonymically used to refer to a man wearing a violet on his sleeve, the pronouns should have been ‘his’ and ‘he’ instead of ‘her’ and ‘she’. There are cases of anaphoric binding whose resolution involves a previously modulated antecedent. As Recanati says

An anaphoric pronoun acquires a character only when its index, and possibly (some of) the additional parameters necessary to determine its content (type of role, referential or descriptive interpretation, situation of evaluation), have been contextually fixed. This point, which I can only mention in passing, is of some importance given its potential consequences for the structure of the theory of meaning, and especially for the division of labour between semantics and pragmatics. (Recanati 2005, 313)

Example (11) is especially interesting, since we can use syntactic arguments to show that it does not state a condition for truth as a whole if taken literally. We can only say that the utterance of (11) in a metaphorically biasing context is true if and only if the female person who has characteristics analogous to a wilting violet forgot her purse when she left. Only in a non-literal reading, can we get the animate subject needed for the felicitous composition of it with the mental process encoded by ‘forgot’ and the modulated meaning of the phrase is demanded mandatorily on pains of ungrammaticality due to vacuous binding of the explicit variables ‘her’ and ‘she’ in the syntax of (11). This constitutes the kind of syntactic evidence for context-sensitivity that minimalists look for. In Borg’s words:

Minimalism for me is the view that there can be no lexico-syntactic context-sensitivity without clear, independent evidence of that context-sensitivity, i.e. without clear behavioural evidence (say, about the way the expression combines with other expressions) and this will be the kind of evidence to be delivered by those working in linguistics departments (...). (Borg 2012, 89)

Taking into account that we “need to accommodate the intra-linguistic behaviour of expressions” (Borg 2012, 214), not even variable resolution is always independent from modulation since some examples of anaphoric pronouns are bound to modulated or extended meanings. The following examples (12)-(13)

(12) When the wilting violet left, the waiter said she was ill

(13) When the wilting violet left, the waitress said he was ill

add evidence on this. It is not possible to account for the “appropriate concatenations of words” (Borg 2012, 214) in (12) and (13) to yield full-fledged truth-evaluable contents without appeal to wide context because there is a binding failure given that there is no female or male antecedent in the sentence for the anaphoric pronoun to inherit its semantic value. Given that the predicate ‘left’ constrains the type of argument role of the subject, we can infer that the speaker of ‘the wilting violet’ is using this expression to refer to an animate being and, by the linguistic information provided by the pronouns, the hearer knows that the referent is a female animate being in (12) and a male animate being in (13). Following Borg’s way of resolving indexicality, we would obtain a proposition guided by the following description for referring with ‘she’ in (12), ‘the actual female person referred to

by the speaker of this token of (12)' but this description does not agree with the linguistic meaning of 'the wilting violet' either. The same applies mutatis mutandis to (13). This lack of linguistic agreement between the anaphoric pronoun and the antecedent results in vacuous binding and thus in semantic failure unless the conceptual connectivity between them is constructed by means of the hearer's inference to get to what the speaker (intentionally) referred to. Guided by the demand of the predicate 'left the room' to get an element satisfying the requirement [+ANIMATE BEING] to saturate the argument slot for its subject and by the search of what the speaker intends to refer to by the use of 'she' in (12) or 'he' in (13), the hearer will choose one of the pragmatic processes available (e.g. transfer or conceptual addition) to find suitable content for the antecedent so that anaphoric binding is eventually allowed.

If examples (7)-(13) are really examples of compositional context-sensitivity, the linguistically mandatory demand due to lack of semantic coordination frees the conception of *mandatory_L* from the necessary condition that the mandatory demand can only be resolved by some token-reflexive descriptions. The pragmatic process demanded by context-sensitive expressions does not always provide us with minimal propositions without appeal to speaker's intentions. This amendment affects the core tenet of minimal semantics, since the recovery of complete semantic content is not possible without appeal to wide context. In this sense, Borg's minimal propositions are not a viable option for all sentences. At least for examples of metaphorical or metonymical anaphor, even Borg would have to dismiss the idea that all sentences deliver propositional semantic content.

Two of the crucial standard minimalist tenets (ii and iii in 2.2) are now refuted. The evidence provided in the analysis of cases such as (7)-(13) shows that *not all* mandatory demands of contextual information are traced to a lexico-syntactic item and that *not all* mandatory demands must be resolved automatically from a narrow context. There are linguistic and compositional mandatory demands of intention-sensitive contextual information which can only be obtained by a non-automatic pragmatic resolution. Intention-insensitive contextual information is not enough to obtain a minimal proposition in all cases. Thus, propositionalism has to be rejected.

5. Conclusions

In this paper we have posed the question of whether the semantic content, when paired with sentences related to a narrow context, is propositional and we have concluded that the content semantically expressed by a well-formed declarative sentence (with respect to the narrow context of utterance) may not be a proposition.

Our argument is based on the recognition that the linguistic and truth-conditional demands of contextual information may arise not only lexically but also compositionally and this kind of (often indexical-free) context-sensitivity cannot be resolved just by appeal to narrow context. Compositionally context-sensitive sentences linguistically (and truth-conditionally) trigger pragmatic adjustment. The pragmatic adjustments required by this type of context-sensitivity, however, cannot be resolved automatically from a narrow context, nor can it be eliminated by means of a context-insensitive covert syntactic structure (the two lines of argument a standard minimalist could admit). Furthermore, these pragmatic effects cannot be explained by positing a context-sensitive covert syntactic structure

that triggers a saturation process as non-standard minimalists could argue. Non-automatic pragmatic resolution such as metaphorical modulation or metonymical supplementation, which is guided by the search of speaker's intentions, is often mandatorily demanded by compositional context-sensitivity.

This reveals our disagreement with the main tenet of standard minimalism. If compositional context-sensitivity is admitted, as we do, the minimal proposition which standard minimalism posits cannot always be obtained; it cannot be automatically determined by the rules of the language without appeal to speaker's intentions. The propositionalist account of semantic content is unfeasible and the notion of *minimal proposition for a sentence related to a narrow context* is incoherent. If semantics is understood as delivering fully truth-evaluable propositions, a semantic theory cannot be constructed for linguistic expressions plus narrow context.

If it makes sense to speak of minimal propositions, these must be obtained for utterances and must be recovered by appeal to wide context as both non-standard minimalists and contextualists do. Nevertheless, they would also have to include the proposals that contextual information is not always demanded by variables (saturation) and that there are non-literal minimal propositions. The minimal propositions expressed by utterances whose sentences are compositionally context-sensitive may be non-literal. Thus, the contrast between what the speaker means and what she literally says, a contrast posited by non-standard minimalists, is illusory. For us and for contextualists, what the speaker says may be literal or not.

This does not mean that compositional context-sensitivity serves as support to contextualism. If we understand that a demand of a process of interpretation is mandatory when it is necessary for propositional content to be present in the interpretation of an utterance, then modulation processes triggered by compositional context-sensitivity cannot be classified as optional processes of interpretation. The contextualist cannot argue for her position saying that there are optional processes of interpretation involved in what the speaker explicitly expresses. Her challenge is to show that the minimal proposition expressed by an utterance is not always the proposition intended by the speaker, or that there are optional demands of contextual information to get what the speaker says. This, however, is another story.

REFERENCES

- Bach, Kent. 1994. Conversational implicature. *Mind and Language* 9/2: 124-162.
- Bach, Kent. 2000. Quantification, qualification and context. A reply to Stanley and Szabó. *Mind and Language* 15/2-3: 262-283.
- Bach, Kent. 2001a. Semantically speaking. In István Kenesei and Robert M. Harnish, eds., *Perspectives on semantics, pragmatics, and discourse. A Festschrift for Ferenc Kiefer*, 147-172. Amsterdam: John Benjamins.
- Bach, Kent. 2001b. You don't say? *Synthese* 128/1-2: 15-44.
- Bach, Kent. 2006. The excluded middle: Minimal semantics without minimal propositions. *Philosophy and Phenomenological Research* 73: 435-442.
- Borg, Emma. 2001. An expedition abroad: Metaphor, thought, and reporting. *Midwest Studies in Philosophy* 25/1: 227-248.
- Borg, Emma. 2004. *Minimal semantics*. Oxford: Clarendon Press.
- Borg, Emma. 2012. *Pursuing meaning*. Oxford: Oxford University Press.

- Cappelen, Herman and Ernest Lepore. 2005. *Insensitive semantics: A defense of semantic minimalism and speech act pluralism*. Malden, Mass.: Blackwell Publishers.
- Giora, Rachel, Oshrat Gazal, Idit Goldstein, Ofer Fein and Argyris Stringaris. 2012. Salience and context: Interpretation of metaphorical and literal language by young adults diagnosed with Asperger's syndrome. *Metaphor and Symbol* 27/1: 22-54.
- Gold, Rinat and Miriam Faust. 2012. Metaphor comprehension in persons with Asperger's syndrome: Systemized versus non-systemized semantic processing. *Metaphor and Symbol* 27/1: 55-69.
- Kaplan, David. 1989. Afterthoughts. In Joseph Almog, John Perry and Howard Wettstein, eds., *Themes from Kaplan*, 565-614. Oxford: Oxford University Press.
- Neale, Stephen. 2007. Heavy hands, magic and scene-reading traps. *EUJAP* 3/2: 77-132.
- Perry, John. 2001. *Reference and reflexivity*. Stanford CA: CSLI.
- Recanati, François. 1993. *Direct reference: From language to thought*. Oxford: Blackwell.
- Recanati, François. 2004. *Literal meaning*. Cambridge: Cambridge University Press.
- Recanati, François. 2005. Deixis and Anaphora. In Zoltán Gendler Szabó, ed., *Semantics vs pragmatics*, 286-316. New York: Oxford University Press.
- Recanati, François. 2010. *Truth-conditional pragmatics*. Oxford: Oxford University Press.
- Recanati, François. 2013. Reply to Romero and Soria. *Teorema* 32/2: 175-178.
- Romero, Esther, and Belén Soria. 2013a. Optionality in truth-conditional pragmatics. *Teorema* 32/2: 157-174.
- Romero, Esther, and Belén Soria. 2013b. Anomaly in novel metaphor and experimental tests. *Journal of Literary Semantics* 42/1: 31-57.
- Romero, Esther, and Belén Soria. 2013c. Challenges to Bach's pragmatics. *Croatian Journal of Philosophy* 13/38: 135-160.
- Romero, Esther, and Belén Soria. 2016. Against Lepore and Stone's sceptic account of metaphorical meaning. *Croatian Journal of Philosophy* 16/47: 145-172.
- Sag, Ivan A. 1981. Formal semantics and extralinguistic context. In Peter Cole, ed., *Radical pragmatics*, 273-294. London: Academic Press, Inc.
- Sperber, Dan and Deirdre Wilson. 1986/1995. *Relevance: Communication and cognition*, 2nd ed. Oxford: Blackwell.
- Stanley, Jason. 2000. Context and logical form. *Linguistics and Philosophy* 23/4: 391-434.
- Stanley, Jason. 2005. Semantics in context. In Gerhard Preyer and Georg Peter, eds., *Contextualism in philosophy: Knowledge, meaning, and truth*, 221-253. Oxford: Oxford University Press.
- Stern, Josef. 2006. Metaphor, literal and literalism. *Mind and Language* 21/3: 243-279.
- Stern, Josef. 2011. Metaphor and minimalism. *Philosophical Studies* 153/2: 273-298.
- Travis, Charles. 2006. Inensitive semantics. *Mind and Language* 21/1: 39-49.
- Travis, Charles. 2008. *Occasion-sensitivity: Selected essays*. Oxford: Oxford University Press.

ESTHER ROMERO is professor of philosophy of language at the Department of Philosophy I, University of Granada. Her research focuses on the analysis of central topics in the philosophy of language, with a special interest on the pragmatic explanations of non-literal uses of language (metaphor and metonymy). She systematically works in collaboration with the linguist Belén Soria.

ADDRESS: Departamento de Filosofía I, Facultad de Psicología, Universidad de Granada, Campus de Cartuja, 18011 Granada, Spain. E-mail: eromero@ugr.es

BELÉN SORIA is senior lecturer in linguistics at the Department of English and German Philologies, University of Granada. Her areas of interest are linguistics, philosophy of language, and pragmatics. She has worked extensively on metaphor, metonymy and other related topics in collaboration with the philosopher of language Esther Romero.

ADDRESS: Departamento de Filologías Inglesa y Alemana, Facultad de Filosofía y Letras, Universidad de Granada, Campus de Cartuja, 18011 Granada, Spain. E-mail: bsoria@ugr.es