

# *Only* without its scales\*

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## Abstract

This work deals with one specific aspect of the semantics of the exclusive adverb *only*, namely its scalarity. It is argued that, contra several analyses, it is not necessary to postulate that *only* conventionally encodes a scalar constraint on its associate. Rather, I argue in favor of the idea that the scalar effects that can be observed in some uses of *only* are pragmatic by-products of its core exclusive meaning. This position is essentially defended in the light of data where *only* intuitively marks a high point on a scale, rather than a low point as is usually assumed. This data proves to be problematic for all accounts that encode scalarity directly into *only*.

This article raises some empirical and theoretical issues regarding the treatment of the adverb *only* as a *scalar* element. While it is not denied that the use of *only* can be accompanied by scalar effects, I argue that these are by-products of a simple exclusive semantics.

I begin by reviewing several analyses of *only* with a specific emphasis on their treatment of the examples that motivate a scalar account of *only* (Sect. 1). I then present some data that weakens the scalarity claim behind *only*, and provides counter-examples to some analyses (Sect. 2). In a final section (Sect. 3), I propose a remedial analysis based on a simpler semantics for *only* and then go on to explain how scalar effects can be derived as the result of pragmatic inferences.

## 1 The semantics of *only* and its scalar component

This section aims at presenting the arguments behind a treatment of *only* as encoding a scalar component. I introduce the elements that form the semantics of *only* by beginning with the less controversial ones. I then present various analyses of *only* and focus on their treatment of the core “scalar” examples.

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\*I thank the audience at the workshop ‘Formal approaches on discourse particles’ at ESSLLI 11 for comments on this work. I am also heavily indebted to my two reviewers for the contents of this article. Finally, I thank Matthijs Westera for informing me on the subtleties of Dutch. All errors and mistakes remain my own.

## 1.1 Exclusion and association

Most, if not all, analyses of *only* agree on one aspect: the core meaning of *only* is *exclusive* (see for example the seminal work by Horn (1969)). This means that the use of *only* in a sentence entails a negative assertion about some elements in a domain. For example, in (1-a) *only* conveys the proposition glossed in (1-b).

- (1) a. John only drinks WHISKY.  
b. → John drinks nothing apart from whisky.

The elements that are being excluded are determined by identifying the *associate* of *only* in its host sentence. The associate is a constituent of the host sentence that is semantically distinguished and entertains a privileged relation with *only* by providing the basis for its interpretation. The associate is usually prosodically marked; although this is not always the case and this feature is heavily language-dependent. In this work, the question of the identification of the associate will not be considered and I will try to use constructions as unambiguous as possible. When necessary, the intended associate will be identified by the use of small capitals, as in (1-a).

## 1.2 The prejacent

Apart from its exclusive meaning, the use of *only* in a sentence like (1-a) also conveys the proposition (2), which corresponds to the host sentence of *only*. Following Peter of Spain, this proposition is called the *prejacent* of *only*.

- (2) John drinks whisky.

The status of the prejacent is the matter of ongoing debates. It has been variously described as being an entailment (Atlas, 1993; Horn, 2002), a presupposition of various sorts (Rooth, 1992; Krifka, 1999; Geurts & van der Sandt, 2004), a conversational implicature (van Rooij & Schulz, 2004) or a complex meaning arising from the interplay of a presupposition and a conversational implicature (Ippolito, 2008). This variety of analysis is rooted in the peculiar behavior of the prejacent in terms of *projection*, i.e. in the way it “survives” its embedding in contexts that usually do not preserve the truth of their elements (e.g. negation, the antecedent of a conditional etc.) My point will not be to argue in favor of one treatment of the prejacent over another. Nevertheless, some projection data will be used to evaluate the merits of some theories, especially that of Beaver & Clark (2008) (see Sect. 2.3).

To sum-up the elements introduced so far: the adverb *only* is considered to belong to the class of *exclusive* and *focus-sensitive* particles. The following semantics, taken from (Krifka, 1999) represent the meaning of *only* in a simplified way. *F* represents the associate (originally identified as the focus of host sentence) and the underlined material originally represents a presupposition, but can be interpreted as a way to indicate that the material in question has a non-standard assertoric status.

- (3) [ONLY[...*F*...]]:  $\neg\exists F' \neq F$  [...*F'*...] ([...*F*...])

### 1.3 The scalar component

Several authors have noted that in some cases, describing the semantics of *only* as in (3), i.e. in terms of its prejacent and its exclusive meaning alone, is not sufficient.

The two main observations can be found in (Klinedinst, 2005). Both involve a notion of a *scale* to which the associate of *only* is supposed to belong, i.e. an ordered set of elements with which the associate forms an alternative.

When the associate of *only* is situated at the top (or near the top) of its scale, the resulting sentence appears infelicitous (4).

- (4) a. #John is only A TOP GENERAL.  
b. #I only won A HUNDRED MILLIONS at the lottery.

Another observation is that the exclusive component of *only* does not exclude elements that are situated below the associate on the considered scale. Thus in (5-a) the restriction only bears on diplomas higher than a master's degree, i.e. the use of *only* does not entail (5-b).

- (5) a. John only has a master's degree.  
b. ↗ John does not have a bachelor's degree.

The non-inference in (5-b) is fortunate given that having a master's degree usually entails having lower degrees.

The examples in (4) and (5) led several authors (Klinedinst, 2005; Raynal, 2008; Beaver & Clark, 2008; Beyssade, 2010) to postulate that *only* also encodes a *scalar* component of some sort. This scalar element entails that the associate of *only* belongs to a scale and that it is situated low on this scale. The exclusive component then only acts on the elements that are superior to the associate on this scale.

### 1.4 Analyses of *only*

I now turn to existing analyses of *only* and briefly sketch how they account (or could possibly account) for the scalar constraint on the use of *only*. This is made in order to facilitate the exposition of the issues presented in Sect. 2.

#### 1.4.1 Non-scalar analyses (Ippolito, 2008)

To begin with, I present Ippolito (2008)'s analysis of *only* which does not integrate any constraint on the scalarity of *only* and would thus appear incapable of dealing with the examples (4) and (5).

The main feature of Ippolito's analysis is to consider that the prejacent of *only* is neither presupposed nor entailed, but comes as a scalar implicature generated by considering a different presupposition for *only*. In her own terms:

... *only* in any sentence of the form 'only A is/are B' does trigger a presupposition, that is the conditional presupposition that if something is B, then A is/are B. This is a 'scalar' presupposition. (Ippolito, 2008: p. 84)

In her analysis, the sentence (6-a) then carries the presupposition (6-b).

- (6) a. John only drinks whisky.  
 b.  $\underset{psp}{\rightsquigarrow}$ If John drinks something, he drinks whisky.

I do not detail the way (6-b) gives rise to an implicature that matches the content of the prejacent (see Ippolito (2008: p. 67) for the details). What is interesting is that Ippolito describes the presupposition (6-b) as being 'scalar'. This scalarity aspect is glossed as follows (about the example "*Only Mary can speak French*"):

[...] I would argue that believing that if anyone (in the relevant set) can speak French, Mary can, seems to commit the believer to the proposition that Mary is most likely than anyone else (in that relevant set) to be able to speak French. (Ippolito, 2008: p. 80)

This intuition appears to be backed up by the possibility to cancel the prejacent under a possibility modal operator and the use of *even* (7). In that case, Ippolito suggests that the (scalar) presupposition of *only* satisfies the requirement on the use of *even*.

- (7) Only Mary can speak French, and maybe not even she can.

It is worth seeing whether the scalar interpretation of the presupposition in (6-b) can be construed as a way to express the scalar component of *only*. Basically, Ippolito's scalar interpretation means that the associate is the most likely element to satisfy its predication. A way to account for the infelicity of the examples in (4) could then be to consider that it is hard to reconcile the fact that the associate is at the same time at the top of its scale and the most likely element to be true. In more concrete terms, one cannot at the same time consider that being a general is a very high military rank and that it is the most probable rank for someone to hold, which appears sensible enough.

An advantage of this explanation is that the nature of the scales is made explicit: they are scales of likelihood (with the top elements being the less likely). Since *only* marks that the associate must be the most likely element in a set, the associate cannot be considered as being unlikely at the same time, which would be the case for having a high rank or winning a large sum of money.

#### 1.4.2 Klinedinst (2005); Raynal (2008); Beyssade (2010): *only* associates with a scale

By observing the data in (4) and (5), some authors (Klinedinst, 2005; Raynal, 2008; Beyssade, 2010) postulated that *only* encodes a hard constraint on the scalar nature of its associate. Basically, their analyses keep the gist of the analysis sketched in (3) and add the following constraint:

- (8) The associate  $F$  must belong to a scale  $S$  such that  $\exists F' \in S \wedge F' >_S F$  and  $F'$  belongs to the set of alternatives to  $F$  (i.e. there must be at least one alternative element higher up than  $F$  on the scale)<sup>1</sup>.

The constraint (8) leaves open the question of the nature of the scales. Scales can be either pragmatic and contextual, or rooted in the semantics of the relevant items (Horn scales, based

<sup>1</sup>The exact status of this constraint is described either as a presupposition (Klinedinst, 2005; Raynal, 2008) or a conventional implicature (Beyssade, 2010). Just like for the status of the prejacent, I will not evaluate this aspect of the proposal

on logical entailment, would be of that later sort). Beyssade makes it clear that the scales in question are pragmatic and contextual, and can sometimes remain implicit. Nothing, however, is said regarding the question of how one gets access to these scales. In some sense this issue is not specific to *only*: the access to the right scale is also a necessary feature for other phenomenon such as the derivation of scalar implicatures. It can then be argued that this question concerns any property that makes references to scalar elements and not just the particular case of *only*.

### 1.4.3 Beaver & Clark (2008): *only* and expectations

Beaver & Clark (2008) analyze the meaning of *only* in a framework that represents the meaning of a discourse as a sequence of (possibly implicit) questions and answers (Roberts, 1996). Each utterance is supposed to answer an active question called the *Question Under Discussion* (QUD). To fully answer the QUD, it is possible to divide it in simpler questions, each being solved in turn.

Under these assumptions, *only* is analyzed as marking that its prejacent provides an answer to the current question that is *weaker* than expected. The prejacent is compared to alternative propositions, obtained by the substitution of the associate by one of its salient alternatives. More precisely the semantics of *only* is divided in the two following components:

- A **main content** according to which the true propositions that are alternatives to the prejacent are all at most as strong as the prejacent itself. This roughly matches the exclusive meaning: nothing that is true is stronger than the prejacent.
- A **presupposition** that states that the true alternative propositions are at least as strong as the prejacent. Combined with the main content, this presupposition yields the truth of the prejacent in non-embedded cases.

These two constraints ensure that the prejacent belongs to some scale and that it is not at the top of this scale. Here again the nature of the considered scales can be of varied types: either one based on entailment, or on more contextual knowledge-based factors.

The case of (4) is thus accounted for by considering that it answers a question such as “*What is John’s military rank?*” For such a question, the possible answers can be ordered alongside the military ranks: the higher the rank, the stronger the answer. Asserting that John has the highest rank possible is thus incompatible with the main content of *only* which explains the infelicity.

As for the non-entailment of (5), it is taken in charge by considering that the alternative proposition to *having a master’s degree* are not *having a bachelor*; *having a Ph.D...* but propositions made out of the conjunction of all the degrees up to a point: *having a bachelor and nothing else*; *having a bachelor and a master*; *having a bachelor, a master and Ph.D...* Therefore negating weaker alternatives only entails that John does not have a bachelor and nothing else, which is consistent with the content of the utterance.

## 2 Issues with scalarity

In this section, I begin by introducing a class of examples that exhibit what I call the *improvement* readings of *only*. These readings appear to go against the intuitions summarized in 1.3 about the scalarity of *only*.

I then proceed to evaluate the ways in which scalar analyses of *only* can deal with the improvement readings and show that they have to assume that a particular type of scale, i.e. an entailment based scale, is involved in those examples.

I finish by detailing the treatment of those examples by Beaver & Clark (2008) because their theory makes explicit predictions regarding the type of scale that is invoked by *only*. I show that these predictions run into trouble for dealing with the improvement readings for reasons linked to the *projective* behavior of *only*, and thus that the account is not satisfactory.

## 2.1 The *improvement* readings of *only*

In this section I want to introduce the class of *improvement* readings associated with *only*. Intuitively, this class is characterized by a use of *only* such that “*only P*” is understood as being better than *P* alone, even though *P* is already considered to be good in the context of the utterance. The case of (9) offers an illustration of such a reading.

(9) John *only* likes to drink SINGLE MALT SCOTCH. He is a real whisky connoisseur.

In (9), the fact that John drinks single malt and nothing apart from this is a good reason to conclude that he is a connoisseur. The conclusion would have been the same without *only*, as (10) shows.

(10) John likes to drink single malt scotch. He is a real whisky connoisseur.

I use the term of *improvement* to qualify the case of (9) because the exclusive meaning can be introduced by *even*, which usually marks that its host is higher than its antecedent on a scale of noteworthiness. The pair (11) shows that the use of *only* in (9) can be combined with the use of *even* to reinforce the *only*-less version (11-a), whereas the sentence without *only* cannot be used to reinforce the sentence with *only* (11-b).

- (11) a. John drinks single malt scotch, he even drinks *only* that. He’s a real whisky connoisseur.  
b. #John *only* drinks single malt scotch, he even drinks it.

The improvement readings of *only* appear problematic for a theory of *only* that postulates a scalar component. As seen in Sect. 1, the scalar component is usually treated as marking that the associate of *only* is *low* on some scale. On the contrary, in (9) the associate appears to occupy the top position of a contextually salient scale, i.e. the one relating to the quality of whiskies. Furthermore, the scalar component is usually invoked to account for a mirative effect according to which the speaker expresses a disappointment at the value of *only*’s associate. This mirative effect is lacking in (9) which is another reason to investigate the scalar component in the light of this data.

## 2.2 Scales for the improvement readings

The first question I want to deal with is to know whether and how theories that postulate a scalar component of *only* are able to account for the improvement examples (e.g. the theories proposed by (Klinedinst, 2005; Beyssade, 2010)) .

I will consider two options here, and in the end will only retain the second one for further evaluation.

1. One can claim that there is an inverted quality scale at play in (9).
2. Or one can claim that in the case of (9) the scale at play is based on logical entailment between sets.

### 2.2.1 Association with an inverted scale

One could argue that in (9) a qualitative scale is indeed at play, but of an inverted nature. Instead of having good whiskies at the top of the scale, they would occupy the bottom of the scale. What *only* would then mark in this case is that John is low on a scale of drinking bad quality whiskies. Such a scale would be compatible with the semantics of *only* and would even help to derive the improvement component behind the use of *only* by claiming that it matches the mirative reading mentioned above.

However, this solution seems rather ad-hoc and looks like an attempt to have facts stick to the theory: depending on the needs for the sentence, one could access either a salient scale with its natural ordering or the same scale, but inverted.

Furthermore, there is at this stage no principled account for why such a scale is accessible in the case of (9) but not for (4). The argument to rule out (4) is that *only* is incompatible with the higher rank on a contextually accessible and salient scale. In (9), the salient scale is not the inverted one, but the one based on the goodness of the whisky. So either *only* is predicted to be impossible for the same reasons as (4), or assuming that the inverted scale is somehow made accessible, it is necessary to give an account of why such an inversion is not possible in (4). In more explicit terms one has to explain why it is not possible to interpret (4) as “*John is low on a scale of low military ranks*”.

Therefore I reject the idea that (9) is interpreted relative to an inverted scale of quality for the whiskies, and more generally that the improvement readings of *only* rely on such scales.

### 2.2.2 Association with an entailment scale

Another way to account for (9) by keeping an analysis relying on a scale is to consider that the scale at hand is as follows:  $\langle \textit{drinking single malt}; \textit{drinking single malt and blends}; \dots \rangle$ , i.e. a scale based on sets such that the lower elements are subsets of higher elements, and not on the contextual scale of whisky quality.

Under this assumption the various constraints on *only* are met: the prejacent belongs to a scale on which it does not occupy the top rank and the excluded alternatives are ranked higher up the prejacent.

While this solution appears sensible, it severely undermines the need to postulate that *only* relies on a scale. A simpler way to describe the type of scale just introduced is to consider that to be felicitous, *only* needs some alternatives to exclude. It does not really matter that these alternatives are ordered between themselves, as long as they exist. The fact that an entailment relation exists between the sets is certainly not crucial to the semantics of *only* in (9). What matters is that there must be some whiskies to exclude from John’s drinking habits, and their ordering is not relevant anymore.

A further argument for doubting that there is a true scale at play here is that, assuming that the scalar theories are right, there should be a mirative effect of *only* according to which the speaker is surprised by the small number of whiskies that John drinks in (9). While the existence (or the absence) of this specific component is hard to pinpoint, my intuition is that it is not carried by (9) in the general case.

Another potential problem for assuming this scale is that, once again, there appears no obvious principled way to decide which kind of scale must be used in *only*'s interpretation: a contextual one, or a more "semantic" one as the one proposed here. In this particular however, a solution has been proposed. In the next section, I look at Beaver & Clark (2008)'s analysis, which explicitly provides a motivation to rely on such an entailment scale. Ultimately, I dismiss their analysis because their predictions on the projection of the prejacent appear wrong.

The line of analysis I then propose in Sect. 3 will assume that *only* does not impose any specific scalar requirement on its prejacent. However, if the excluded alternatives are independently ordered for some reason, then their exclusion will be accompanied by some pragmatic effects that correspond to intuitions about the scalar component of *only*.

### 2.3 The projection problem

In the discursive model adopted by Beaver & Clark (2008) the use of an entailment scale of the form discussed previously receive some justification. To be successfully interpreted (9) must be understood as an answer to the current question (CQ). In the absence of an overt question, the CQ is reconstructed. In this case, the reconstructed CQ will be (12), which ensures that the answer is semantically congruent with the question.

(12) Which type of whisky does John like to drink?

With such a question the considered scale will be one composed of the various combinations of whiskies one can drink and the use of *only* will mark that it was somehow expected that John had more varied habits in his whisky drinking. In the B&C approach the appeal to an entailment scale is then justified on congruence terms. Contextual scales are not excluded, but in this case do not need to be invoked.

An interesting consequence of this analysis is its prediction regarding the *projection* of the prejacent of (9). The basic tenet of the B&C projection account is that a given meaning is projected out of non-veridical contexts iff. this material is not at issue to answer the QUD. This line of analysis was recently reaffirmed in (Simons et al., 2010).

To understand why the prejacent of *only* is not at issue in (9), one needs to consider the alternative propositions built out the entailment scale. All of the considered alternatives are such that they entail that John likes to drink single malt scotch. This is because the prejacent must be at the lower end of the scale and thus be entailed by every other alternative element. Since the prejacent is entailed by each and every alternative, this entails that its truth is not at issue: every possible situation ensures its truth. Thus, the prejacent is supposed to project out of non-veridical contexts (see Beaver & Clark (2008: p. 267) for a general explanation of why entailment scales ensure the projection of the prejacent).

However, this prediction is problematic. To see this, one has to embed an *improvement* reading of *only* under non-veridical operators such as negation (13-b) and interrogation (13-c). None of these answers necessarily entail that John drinks single malt scotch, even though this information is compatible with the content of each utterance.



- (13) a. A: Is John a whisky connoisseur?  
b. B: Well... one thing is for sure: he does not only drink single malt scotch.  
c. B': I don't know... Does he only drink single malt scotch?

Similarly, the sequence in (14) is perfectly acceptable, and *B*'s negative answer is not understood as particularly deviant (which would be the case if *A*'s question committed the speakers to the truth of the prejacent).

- (14) a. A: Is Jane as picky as her sister in her dating standards? Does she only date movie stars?  
b. B: No, Jane hates movies stars above everything else.

To avoid predicting the projection of the prejacent in the B&C system one needs to consider that the scale at play is not an entailment based one, i.e. that it is not true that all considered alternatives entail the truth of the prejacent, or in other terms that the prejacent is *at issue*. While this appears sensible (after all the truth of the prejacent has bearings on the discourse in the previous examples), this leads us back to the problems mentioned in 2.2 about the reconstruction of a relevant scale for the interpretation. In the present case the question is precisely on which non-entailment based scale does the prejacent rank as low? The problems mentioned in 2.2 thus surface again.

## 2.4 Taking stock

In this section I have used what I called the *improvement* readings of *only* to show that the scalarity postulate about the meaning of *only* is either misleading or at best unnecessary:

- Postulating an association with an arbitrary scale is problematic because this either predicts that any type of scale should be equally accessible, or imposes an unnecessary scalar structure on a set of alternatives.
- Under the B&C account it is possible to motivate a scalar account based on an entailment scale. However, this incorrectly predicts the projection of the prejacent out of non-veridical contexts.
- One could keep the B&C account and do away with the predictions about the projection of the prejacent. However, this would go against one of the main motivations of their account and would lead us back to the problems of previous accounts: why should we postulate a scale when the mere existence of alternatives appears sufficient to do the job?

Building on these observations, I give a leaner analysis of the semantics *only* in the next section.

## 3 A non-scalar analysis of *only*

So far we have seen that assuming that *only* necessarily conveys a scalar component leads to several problems. I now want to propose that a simple exclusive semantics for the main content of *only* can manage the effects traditionally considered to be scalar.

Once this is done, I check that the predictions about the projection of the prejacent are right after which I compare the semantics of *only* with that of a pragmatic exhaustification mechanism and finish by looking at an alternative explanation, based on the ambiguity of the lexical item *only*.

### 3.1 Simple exclusion

One of the conclusions that I tried to defend in the earlier sections is that the crux of the matter for the exclusive part of *only* is the question of how the alternatives to the prejacent are defined. Basically, in order to be licensed, *only* needs to be able to exclude some elements.

The semantics I now want to propose for the assertive part of *only* are thus very close to the one proposed in (3). In this sense, the whole analysis gives credence to the ones proposed by Ippolito (2008) and Zeevat (2011) since both propose analyses that lack an explicit scalar component.

I choose to represent the exclusive meaning by borrowing the representation that can be found in (Zeevat, 2011) because it explicitly addresses the points I need to underline and also provides an account of the projection of the prejacent. Zeevat's analysis rests on two equally important notions: a definition of *superweak* presuppositions and a *distinctiveness* relation between elements.

The notion of a superweak presupposition is defined as a subtype of presuppositional material. The main difference between standard, run of the mill presuppositions and superweak ones is that the latter cannot be freely accommodated in the context of utterance in order to be satisfied. However superweak presuppositions have the following positive properties:

- They can be satisfied by any element of the left context of their host, including content that was conveyed in non-veridical environments (which is not true of standard presuppositions).
- They can be *trivialized*, i.e. one can choose to ignore them as long as their content is consistent with the common ground. In other terms, trivializing a superweak presupposition  $p$  amounts to be able to imagine that it is possible that at least one (rational) person can entertain the belief that  $p$  is true, without actually committing the speaker himself to the truth  $p$  (again contra the properties of standard presuppositions).

An example of superweak content is given by *even* which superweakly conveys the negation of its host. Thus in (15) the speaker conveys that before his assertion it was conceivable that Paul did not smoke.

(15) Even Paul smokes.

Regarding *only*, the actual representation proposed by Zeevat is as follows:

(16) Only  $P(x)$ :  
 $x, Px, \text{superweak}(x, y, Px, Py, \text{distinct}(x, y)) : \neg Py$

The material on the left of the colon belongs to the presuppositional domain while material on the right is the main content of the utterance. So (among other things that we ignore for the moment) the representation in (16) superweakly presupposes that  $x$ , the associate of *only*, has a distinct alternative  $y$ , and asserts that  $y$  does not have the property  $P$ . One of the advantages of

this representation is that it ensures that there must exist at least one salient alternative element for the associate of *only*.

The semantics given in (16) are very close to the B&C account relying on scales built out of a subset relation. However, nothing here is said regarding the scalar nature of the associate, the only requirement is that there should exist at least one distinct element for the associate.

### 3.2 Projection

The B&C account was rejected because it made wrong predictions regarding the projection of the prejacent in the improvement cases. Although I will not discuss Zeevat's approach in deep detail, I now want to show that it makes the correct predictions for the projection of the prejacent in the improvement cases (for more detail on the projection of the prejacent in general, the reader is referred to Zeevat (2011: pp. 12–13)).

The peculiarity of *only* regarding projection is due to the fact that the prejacent gets a double status: it is typed both as a standard and a superweak presupposition (cf. (16)). In the case of (13) the person who asks the question explicitly sheds doubt about the fact that John is a whisky connoisseur. This means that a straightaway accommodation of the prejacent of *only* in *B*'s answer is out of question since it would entail that *A*'s question is solved (because drinking only single malt amounts to a positive answer to *A*'s question). However, the superweak nature of the prejacent also allows it to be satisfied either by elements that have merely been suggested in the context or by the operation of trivialization. In simpler terms: *only* is licensed as long as the context does not entail the falsity of its prejacent. Since the context in (13) is compatible with the prejacent of *only* then its use is licensed, but without giving rise to the projection of the prejacent since it was explicitly "suspended" by *A*'s question.

To summarize on projection: the formalization given in (16) correctly predicts that the prejacent is not projected in (13). The way this result is achieved is not entirely alien to accounts that use a notion of being *at issue* (e.g. the B&C account) since the non-projection in (13) comes from the fact that the prejacent is explicitly questioned. However as seen in Sect. 2.3 the B&C account is not coherent regarding the data at hand, even though it uses a notion of at-issueness.

In the line of what has been said so far, the questions we now need to answer are the following:

- How does a non-scalar semantics handle the examples that motivate the scalar sensitivity of *only*?
- How does one handle the improvement readings of *only*?

These two questions are addressed in the next section, after which I briefly state the differences between a simple exclusive semantics for *only* and a pragmatic exhaustification mechanism.

### 3.3 Scalar effects as pragmatic effects

I now want to argue that the scalar effects of *only* and its improvement reading both come as pragmatic effects that can be derived by considering the exclusive component of *only* and the notion of *distinctiveness* that weighs on the set of alternative elements.

### 3.3.1 Infelicity of top scale

Let's look at example (4-a), repeated here for convenience.

(17) #John is only A TOP GENERAL. = (4-a)

With the analysis in (16), the question about the meaning of *only* in (17) becomes one about the existence of a distinct alternative to the prejacent that also could have been true. It is now important to observe that military ranks are *already* mutually exclusive: asserting that John is a top general ensures that he does not hold any other rank. More generally, this is true for most of the examples that have been used to motivate a scalar analysis of *only*. Therefore it is not relevant to suppose that the speaker of (17) used *only* to convey the simple exclusion of other ranks. What would be the use of *only* in this case then? To get an idea, let's observe (18).

(18) John is only A LIEUTENANT.

In the felicitous (18) *only* does not merely exclude that John is higher ranked than lieutenant: this is already part of being a lieutenant. What *only* excludes is that, for example, John does not have the influence or power of higher-up ranks, i.e. the exclusion of *only* is relative to the contextual effects of holding some specific rank. In this case a rank *A* will be considered distinct from a rank *B* iff. *A* is a higher rank than *B* (but *B* will not be distinct from *A*, because it would not yield effects that *A* would not). In other words, it is here the distinctiveness relation, which lies outside of the semantics of *only* that takes in charge the scalar interpretation underneath (17) and (18). In this precise case, the way to distinguish between elements rests on scalarity, but this does not have to be necessarily the case<sup>2</sup>.

### 3.3.2 Ambiguous cases

As pointed out by a reviewer, the above explanation does not appear to work for the case of (19).

(19) John only saw A SECRETARY.

In (19), it is understood that the exclusion only covers people higher than a secretary in a company's hierarchy. In this case it seems that the exclusion is indeed scalar, and furthermore that this scalarity is part of the truth-conditions of the utterance. The sentence appears falsified only if John saw someone higher up, not if he saw the doorman as well. Furthermore, the explanation given previously about the impossibility for one person to hold two distinct ranks at the same time does not appear operative here.

Nevertheless, contrary to what seem to be, I want to argue that a simple exclusive semantics for *only* still works here. First, one has to observe that the scalarity of (19) here is, once again, context-dependent. It is perfectly acceptable to understand (19) as conveying a non-scalar exclusion:

(20) The office was almost empty. John only saw a secretary.  
     $\rightsquigarrow$  Apart from that secretary, John did not see anyone in the office.

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<sup>2</sup>For the case of (4-b) the explanation would be similar: only bigger sums of money would be considered.

Therefore, the set of distinct alternatives for the associate is given by the context and by what is assumed about the speaker's goals. The scalar interpretation of (19) is only relevant if one assumes that John had an interest in seeing someone as high as possible. In this case, a person *B* will be distinct from a person *A* only if *B* is higher in the hierarchy than *A*. This is similar to the explanation given for (18), and gives (19) an interpretation which is similar to (21).

(21) John saw someone who is only a secretary.

Thus, it is still possible to keep a simple exclusive semantics for *only* in the case of (19). It is the determination of the set of alternatives for the associate that is responsible for the scalarity effects: in some cases elements of this set are distinguished on a scalarity basis, but not always. (19) could even be seen as a case in point since we showed that it does not always exhibit a scalar interpretation.

### 3.3.3 The mirative component

The mirative component attached to *only*, namely the intuition that John could have had a higher rank in (18) comes from the interaction between two elements:

1. The superweak presupposition according to which it must be conceivable that John holds a rank that is *distinct* from lieutenant.
2. The fact that the only considered alternatives are all higher than lieutenant, i.e. that lieutenant is the lowest rank being considered (lower ranks are not considered distinct).

The combination of these two components of meaning entail that, in the general case, it must have been possible for John to hold a higher rank before the assertion. If the speaker has an interest in John being up the scale then this component gives rise to the disappointment reading: the speaker expected John to be more than a lieutenant in order to serve his own goals. But this is not the general case, and this reading is quite context-dependent. What remains context-independent is merely the fact that John could have had a different rank. It is then context that determines what is a different rank, and that can also rank the alternatives according to the speaker's preferences.

The core constraint on the use of *only* is that it must be able to exclude some element. By itself this already entails that the speaker considers that there could have been more than what he is asserting. His own preferences are then added to that consideration.

### 3.3.4 The improvement readings

To wrap up this section, the case of the improvement readings of *only* needs to be explained. With the preceding background, the explanation appears straightforward.

For example, let's consider (9) again. The set of alternatives considered contains whiskies that are distinct from single malt scotch. Here the distinctiveness relation is not scalar: a whisky *w* is distinct from a single malt scotch, if it is not a single malt scotch, quite simply. Thus, the use of *only* does not bear on scalarity.

On the other hand, besides what is needed for *only*, there is an ordering between what makes a real whisky connoisseur: it is possible to measure how much of a connoisseur a person is depending on his drinking habits. The relevant ordering might look like (22):

- (22) *⟨drinking only blends, drinking blends and single malt scotch, drinking only single malt scotch⟩*

The assertion of (9) then places John on the top of the scale of (22), i.e. it marks him as a genuine connoisseur. By itself the improvement reading is not inscribed in the semantics of *only*, but is a consequence of the exclusion it marks in this context.

So here again, *only* keeps a simple exclusive semantics and other effects come through pragmatic interpretation. This is what allows *only* to be understood as marking either the top or the bottom of one and the same scale (as would be the case for (22)).

### 3.4 Differences between *only* and pragmatic exhaustification

By assuming that *only* essentially encodes an exclusion, its semantics become very close to the pragmatic exhaustification mechanism that ensures that (23-a) is interpreted as (23-b).

- (23) Who came to the party?  
a. John.  
b. Only John.

A fair question is thus to know which differences, if any, exist between the two answers in (23). There are at least three such differences.

First, *only* functions as a licenser for Negative Polarity Items (as noted for a long a time, see e.g. Horn (1989)):

- (24) a. #John lifted a finger to help Mary.  
b. Only John lifted a finger to help Mary.

Assuming a semantic licensing of NPI by negation, this comes as no surprise given the intrinsically negative contribution of *only* (as formalized in (16)).

Next, while it is true that the two answers in (24) convey the same thing (namely an exclusion and the “prejacent”), the status given to both materials are quite different:

- With *only* the prejacent is not a main content, and the restriction is a main content.
- With pragmatics exhaustification, the “prejacent” is the main content, and the restriction is a scalar implicature (see e.g. Geurts (2010) for details about this).

This has immediate consequences for integrating both answers in discourses since discourse relations must attach to the main content of the preceding discourse segment (see Jayez (2010) for details). This can be seen with on the following examples:

- (25) Who came to the rehearsal?  
a. Lemmy. So we managed to work on “Ace of Spades”.  
b. #Only Lemmy. So we managed to work on “Ace of Spades”.  
c. #Lemmy. So we were not enough to work.  
d. Only Lemmy. So we were not enough to work.

With *only*, a discourse continuation on the prejacent is impossible (25-b), whereas it is perfectly acceptable on the exclusive meaning (25-d). With a pragmatic exhaustification, the situation is reversed: (25-a) vs. (25-c).

A third difference lies in the potential argumentative effects of *only* as compared to those of an exhaustive interpretation. Depending on the excluded alternatives, *only* can either invert or strengthen the argumentative effects of the prejacent whereas exhaustification has no such effects: the argumentative orientation of an utterance is entirely given by its main content. This is studied further in Sect. 4.

### 3.5 The ambiguity hypothesis

As suggested by a reviewer, an alternative explanation for the apparently contradictory uses of *only* (i.e. scalar vs. improvement) could be that *only* is a lexically ambiguous element with different characteristics. On one hand it could express a restriction on scalar items, and on the other hand a simpler restriction that lacks this feature, and would be limited to the non-scalar cases.

This hypothesis is notably supported by the fact that in some languages this distinction is realized by two distinct lexical elements. Dutch is such a language as it makes a distinction between *alleen* that would mark the non-scalar exclusion and *slechts* that marks an exclusion and conveys that its associate is low on a scale. Even though these two items can often be substituted for another, it is possible to find contexts that oppose them. For example in (26), one of the prototypical scalar examples, *slechts* is acceptable whereas *alleen* is not.

- (26) a. Jan is slechts een luitenant.  
John is SLECHTS a lieutenant.  
b. #Jan is alleen een luitenant.  
John is ALLEEN a lieutenant.

For the improvement cases *alleen* can be used, but *slechts* cannot.

- (27) a. #Jan drinkt slechts single malt scotch.  
John drinks SLECHTS single malt scotch.  
b. Jan drinkt alleen single malt scotch.  
John drinks ALLEEN single malt scotch.

Thus, one could argue that the simple semantics I advocated correspond to cases where *alleen* would be used in Dutch, while the scalar semantics proposed by several authors must be chosen when Dutch would use *slechts*. However, this move would have few desirable effects. It was shown in Sect. 3.3 that a unified semantics can explain both the scalar and improvement cases, so postulating an ambiguous contribution of *only* would not help to properly account for its semantics. And since assuming a unique semantics is preferable to a case of ambiguity, there is no real reason to assume an ambiguous entry for *only*.

To explain the fact that *only* is translated by two items in Dutch, one can assume that each is specialized and only covers a subset of the uses that are allowed by *only*. The situation is comparable to the case of additive and adversative connection in Russian as described by Jasinkaja & Zeevat (2009). Where English has two items, Russian has three that delimit the space occupied by the two English ones in a different way, without making it necessary to

assume an ambiguity in the English items.

## 4 Discursive effects: argumentation

On several occasions, I have mentioned the discursive effects of *only*, namely that, depending on pragmatic factors, it can be seen as a mark of disappointment or improvement.

The discursive effects behind the use of *only* are at the core of the *argumentative* description of *only* given by Ducrot (1973). In this section I evaluate and refute Ducrot's description. This is done for two reasons. First, the argumentative perspective on discourse is successful in accounting for a variety of discourse phenomenon (see for example Winterstein (2010)) and thus deserves to be evaluated, even if it is less widespread than more standard theories. Second, even though I eventually refute Ducrot's approach, the semantics I have given earlier for *only* make the correct predictions for the argumentative behavior of *only*, which gives another argument in favor of my analysis.

Ducrot proposes that the main discursive effect of *only* (actually French *seulement*, which is roughly equivalent) is as an argumentation reversal operator. Argumentation is a relation between two propositions such that a content *A* is an argument for a content *B* iff. the assertion of *A* gives good reasons to believe *B*<sup>3</sup>. In that case, we call *B* one of the (argumentative) *goals* of *A*. For example the first segment of (28) is an argument for the second, which explains the good cohesion of the discourse.

(28) John solved some problems. He did ok.

Adding *only* to the first segment of (28) degrades the sequence (29).

(29) #John only solved some problems. He did ok.

According to Ducrot this is because *only* switches the argumentative orientation of its pre-jacent: for any presupposition *B* such that *A*, the pre-jacent of *only*, is an argument for *B*, then "*only A*" becomes an argument against *B*. Therefore the discourse in (29) is not coherent anymore which explains its infelicity.

The description of *only* as an argumentative reversal operator thus predicts that two sentences of the form "*A*" and "*only A*" can never be used as arguments for the same conclusion. Yet, the pair of examples (9) and (10), repeated in (30), shows that in some cases this is possible: both first segments in (30-a) and (30-b) are arguments for the conclusion "*John is a real whisky connoisseur*", and they only differ by the addition of *only* in (30-a).

(30) a. John only likes to drink single malt scotch. He is a real whisky connoisseur.  
b. John likes to drink single malt scotch. He is a real whisky connoisseur.

The argumentative postulate is thus falsified. Even worse, it appears that in (30-a), the use of *only* gives an even better argument for its conclusions than the *only*-less version (cf. the discussion about *even* in Sect. 2.1).

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<sup>3</sup>The details of the argumentative approach cannot reasonably be summed-up here. The interested reader is referred to (Winterstein, 2010) for more details, especially on the probabilistic interpretation of the relation of argumentation.



To account for this, I argue that it is not necessary to postulate that *only* conventionally encodes an argumentation reversal. Rather, it is sufficient to observe that its exclusive component alone yields this effect in certain cases. As stated before (e.g. in (16)), the exclusive meaning of *only* is essentially a matter of negation. Negation is also an argumentative reversal operator: if  $A$  is an argument for  $B$ , then  $\neg A$  is an argument against  $B$ . In the case the alternatives of the prejacent of *only* are higher up than the prejacent on an argumentative scale, their negation will then be counter-oriented to the prejacent. Thus, the use of *only* will entail an argumentation reversal. More formally:

- Suppose that  $A$ , the prejacent forms a scale with its alternative  $A'$ :  
if  $A$  is an argument for  $B$ , then  $A'$  is a better argument for  $B$ .
- Since  $A'$  argues for  $B$ ,  $\neg A'$  yields an argument against  $B$ .
- Using *only* negates the alternative, which means that the main content of an utterance with *only* is an argument against  $B$ .

This explanation applies to cases like (29), but crucially not to (9). This is because the excluded alternatives are not necessarily argumentatively stronger than the prejacent: the use of *only* excludes lower quality whiskies, and by doing so gives an even better argument for its conclusion.

Therefore, I conclude that it is wrong to postulate a conventional argumentative effect of *only*. While its use can yield such effects and a good description of *only* should allow the derivation of these effects, they come as the by-products of the negation that is inherent to the exclusive meaning of *only*, and once again do not belong to the semantics of *only*.

## 5 Conclusion

The general conclusion of this work is that it is possible, and even desirable, to avoid postulating that *only* encodes a scalar component in its meaning. I showed that, besides the question of the status of its prejacent, an essential part of the semantics of *only* is the way one constructs its set of alternatives. If it happens that the alternatives are ordered, as they often are if they are already mutually exclusive, some discursive effects will be derived and give rise to the intuition that *only* has a scalar effect.

By themselves, the semantics I proposed for *only* are thus not new: both Ippolito (2008) and Zeevat (2011) already proposed a semantics for *only* that is bereft of any explicit scalarity. The point of this paper was to show that this move is licit and warranted by data, namely by the improvement cases. Those examples proved to be challenging for all other analyses that suppose *only* is in some way scalar.

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