

Exclusive Morphosemantics: *Just* and Covert Quantification

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1. Introduction

This paper is concerned with the broad notion of exclusivity and the question of what features exclusive operators share, as well as the ways in which they differ. The focus of the analysis is on English exclusive *just* and its wide variety of uses. I present a morphosemantic framework to represent the variation among exclusive operators in terms of a common ‘core’ meaning. This builds generally on the litany of analyses of exclusive particles ((Rooth, 1985, 1992; Beaver & Clark, 2008; Orenstein & Greenberg, 2010; Coppock & Beaver, 2011a,b; Orenstein, 2015), among others) and follows the basic framework and assumptions I laid out in an earlier stage of this project (Wiegand, 2017).

The morphosemantic framework formalizes the different selectional requirements and contributed meanings among exclusive operators as morphologically-represented restrictions on their arguments. Under this formalization, arguments of exclusive operators are not limited to the prejacent proposition; rather, exclusives also take as arguments an alternative set and an ordering relationship on that set. I also highlight some data where *just* behaves as an exclusive operator over non-standard alternatives, in the form of what I have called unexplanatory *just*. A few examples are provided below in (1).

(1) Unexplanatory *just*

- a. *Context: A girl has been pushed down the stairs by some unseen force.*
Snyder: ... What happened?
Cordelia: She fell! She, she, we were standing at the top of the stairs and she **just** fell! All by herself!
(*Buffy the Vampire Slayer*, S1E11)
- b. I was sitting there and the lamp just broke!

While not traditionally exclusive, this use of *just* does serve to negate alternatives, conceptualized as explanations for the eventuality described. I take this as evidence, following Orenstein (2015), that *just* can quantify over covert elements in its prejacent, in this case causation relationships. However, I argue that the behavior we observe with unexplanatory *just* is much broader than quantification over causes and explanations. There is no clear line between these unexplanatory uses and uses like the ‘emphatic’ or Extreme Degree Modifier (Lee, 1987; Morzycki, 2012; Beltrama, 2016) uses of *just*, shown below.

(2) ‘Emphatic’/Extreme Degree Modifier *just*

- a. I just love your scarf!
- b. That fish was just gigantic!
- c. You just don’t understand.

I argue that we need to broaden our view of what constitutes an alternative set, in order to explain the common behavior in these various uses of *just*. It requires that we somewhat disentangle focus semantics from the generation of alternatives, as uses like (1) and (2) do not associate with focus. The inclusion of covert triggers for alternative sets in the theory also necessitates constraining alternatives for more

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traditional exclusives like *only* to the ordinary Roothian alternatives derived via focus semantics (Rooth, 1985, 1992). Ultimately, I argue that the requirement of prosodic focus is a possible parameter for exclusives, which is present for operators like *only*, but absent for others like *just*. The lack of requisite association with focus is what allows *just* to quantify over covert elements, and thus explains its much wider distribution and range of meanings.

2. Morphosemantic framework

2.1. Background: [EXCL] and implementation for the scale parameter

This framework assumes that all exclusive operators share a common core semantic entry, which I have labeled [EXCL]. The more minute differences between the meanings of particular exclusives are the result of additional morphological restrictions present with some operators and absent with others.

The semantics of exclusive operators is generally taken to include two parts: the prejacent, and the quantificational statement negating alternatives to the prejacent (Rooth, 1985, 1992; Beaver & Clark, 2008; Roberts, 2011; Chierchia, 2013). For the purposes of this paper, I largely ignore the at-issue status of the prejacent itself;¹ however, I will argue for the presence of more complicated prejacent structures, and consequently more complicated alternative sets, than what is usually assumed. But once the structure of the prejacent has been calculated, the contributed semantic content for an exclusive is taken to be the quantificational denial of alternatives. I posit the following general semantic entry for exclusives, a slight variant of existing entries proposed for *only* (Rooth, 1992; Chierchia, 2013).²

$$(3) \quad \llbracket \text{EXCL} \rrbracket = \lambda C_{\leq}. \lambda p. \lambda w. \forall q [(q \in C_{\leq} \wedge w \in q) \rightarrow p \leq q]$$

In addition to a world variable, exclusive operators take as arguments a prejacent proposition p , an alternative set C , and an ordering \leq on set C . All exclusive operators can be described with this basic entry, though many have further restrictions. A classic example is the distinction between operators like *only* and *merely*, the latter of which has a more restricted distribution. In addition to the differing distributions, *merely* has been described as requiring a depreciatory or minimizing interpretation of the prejacent, which is optional for *only* (and *just*). The non-overlapping distribution of *merely* and *only* is exemplified most clearly in cases of ‘evaluatively maximal’ prejacentes, where *only* is licit as an exclusive while *merely* is not. Some examples adapted from the discussion of the difference between Hebrew *rak* ‘only’ and unstressed *stam* ‘merely’ in Orenstein & Greenberg (2010) are shown below in (4).

- (4) a. Bill only won the Nobel Prize.
b. # Bill merely won the Nobel Prize.

In (4a), the (felicitous) interpretation is that Bill won no prize other than the Nobel Prize; however, this interpretation is not available for (4b), as *merely* is required to utilize an evaluative scale. As such, it is infelicitous to use *merely* in a context where the prejacent is the highest valued element in the context.

The difference between operators like *merely* and *only* can be captured by adding a morphosemantic restriction on the ordering \leq for *merely*. I have labeled this restriction [M], which operates on [EXCL] and requires that its alternative set be ordered by an evaluative or normative ordering (i.e., a non-entailment ordering). The formalization of [M] is given below in (5).

$$(5) \quad \llbracket \text{M} \rrbracket = \lambda F. \lambda K_{\leq} [F(K_{\leq}) \wedge \partial(\leq \text{ is an evaluative ordering on } K)]^3$$

Given this operator [M] present for *merely*, we can account for the distributional differences between *merely* and *only*. *Merely* is restricted to environments where its prejacent is an element of an alternative

¹ This has been discussed extensively in the literature (Roberts, 2011), but bears little on the current discussion.

² This quantificational denial has standardly been described as simply the negation of all alternative propositions that are not entailed by the prejacent, which is captured with the entailment ordering relationship \subseteq on the alternative set C . However, in order to account for what has been described as the scale parameter (Orenstein, 2015) differentiating operators like *only* and *merely*, I have generalized the ordering relationship to a variable \leq , which is filled in by the context. This allows us to capture the behavior of exclusives that do not operate on entailment scales.

³ Here, I utilize the ∂ notation from Beaver (2001) to denote presuppositional status.

set that is not ordered by entailment. Both *merely* and *only* contain [EXCL] as their core contributed meaning, but *merely* has this additional morphosemantic restriction.

3. Covert sources of alternatives

3.1. Unexplanatory *just* and cross-linguistic motivations

Another source of variation among exclusives that has been observed is the apparent availability of covert elements as the source of variation in the alternative set. This has been observed in Orenstein (2015) in the behavior of stressed *stam*, usually glossed as ‘merely’. However, this variant of *stam* exhibits a very similar pattern to English unexplanatory *just*; as such, I argue that a similar analysis should be applied to *just*. As Orenstein notes, when *stam* is prosodically emphasized, it seems to quantify over a different set of propositions, what Orenstein calls ‘internal alternatives’ or variants of the prejacent. An example of this use of *stam* is shown below in (6).

- (6) kibalti Saon, ha-beaya hi Se-ze *STAM* Saon!
 Got.I watch the.problem she that.it *STAM* watch
 ‘I got a watch. The problem is that it’s *STAM* a watch!’ (Orenstein, 2015:103)

Here, the resulting paraphrase is ‘it’s just a plain watch, and not a better kind of watch’. So, unlike what we would expect for an exclusive like *only*, the quantificational denial is over propositions involving better kinds of watches, rather than alternative objects. Orenstein (2015) argues that *STAM* combines with alternatives including covert modifiers of ‘watch’, and therefore that the alternative set includes variations of ‘it’s just a MOD watch’, where *watch* is modified by a covert modifier. The true element in the alternative set is analyzed as ‘standard’, resulting in the interpretation that the watch is not special. I argue that *just* can be analyzed in a very similar way, particularly in the case of unexplanatory *just*.

Unexplanatory *just* is used to distance the speaker from explanation, cause or reason for the eventuality described in the proposition it modifies. Some further examples are given below in (7).

- (7) Unexplanatory *just*
- a. I was sitting there and the lamp just broke!
 - b. I walked into the store, saw the necklace, and just took it. I don’t know what came over me.
 - c. He just stopped texting me. (I don’t know why.)

The intuition for a sentence like (7a) is that the speaker is implying that the lamp broke spontaneously, or denying knowledge of how it broke. This comes with a variety of discursive effects, including a suddenness implication or speaker distance. However, I argue that the asserted content of (7a) is a negation of an available explanation for the lamp breaking.

This implication can be targeted with negation, as shown below in (8). Consider a context where a parent (A) has walked into a room and discovered a broken lamp on the floor next to a child (B).

- (8) A: What happened here?
 B: The lamp just broke!
 A: The lamp didn’t just break, Timmy. Did you break the lamp?

It seems clear that the question this discourse addresses is how or why the lamp broke. In the last line, the parent A is negating the implication that the lamp broke for no reason.

This contrasts with ‘ordinary’ *just*, where it behaves like other exclusives such as *only* and *merely*. The meaning is significantly different; it does not mean ‘the lamp broke and nothing more’. Note, though, that in a different context, a similar negated sentence can be used as an ordinary exclusive.

- (9) a. The lamp didn’t just [break]_F—it also cost me \$500 to replace!
 b. The lamp didn’t just [break]_F—it also made a really loud noise!

In contrast, ‘ordinary’ exclusives like *only* and *merely* cannot be used to indicate lack of cause/explanation like we see with unexplanatory *just*. This is shown below in (10), where these other exclusives are infelicitous with the intended unexplanatory interpretation.

- (10) a. # I was sitting there and the lamp *only/merely* broke!
 → The lamp broke for no apparent reason.
 b. # He *only/merely* stopped texting me!
 → He stopped texting me with no explanation.

This parallels the distributional differences between *only* and *merely* we saw earlier, where there is some overlap but one type is more restricted than the other. It seems that in this case, *just* is even less restricted than *only*, as *only* is required to operate as a standard exclusive, while *just* is more free. This can be explained via another morphosemantic operator that restricts the context for operators like *only* and *merely*. I argue that the operator in question is one that requires overt association with focus.

Unexplanatory *just* does not associate with prosodic focus the way ordinary exclusives do.⁴ However, Rooth (1992) posits the Focus Principle, which requires that alternative sets must be subsets of focus alternatives. Without the presence of prosodic focus with this use of *just*, it cannot adhere to this principle when generating its alternative set. Despite this I argue that unexplanatory *just* can still be represented as an exclusive via [EXCL]. However, analyzing it as an exclusive will require two interdependent adjustments to the existing theory: allowing and constraining covert elements in the prejacent of exclusives, and re-encoding the Focus Principle as a lexical morphosemantic parameter.

We can encode causation relationships as accessible entities for quantification. Unexplanatory *just* can then be analyzed as a negation of these causal relationships without modifying the [EXCL] semantic entry. Consider for simplicity, the modified example in (11) with the unexplanatory reading.

- (11) The lamp *just* broke.

Here, instead of analyzing the prejacent as we would for *only*, we need to allow internal modification by a covert *because*-clause. The alternative set for (11) will then be triggered by the epistemically accessible causal relationship introduced by this covert element.⁵ The modified prejacent and resulting alternative set for (11) are represented below in (12) and (13).

- (12) $\phi =$ The lamp broke \square CAUSE₀
 (13) $C =$ {The lamp broke \square CAUSE₀, The lamp broke \square (because the cat knocked it down), The lamp broke \square (because the wind knocked it over), ... }

In terms of interpretation, I propose that this minimal cause is essentially a filler cause that serves to introduce the alternatives of the appropriate type and structure. It need not contribute any new information in terms of the actual explanation for the eventuality described in the prejacent. In fact, we have evidence from some examples of overt *because*-clauses that it is possible to fill in redundant information as a cause or explanation. Consider the following naturally-occurring utterance in (14).

- (14) “*When it comes to Americans’ voting behavior, often times they’ll vote on party lines, because they don’t necessarily know a lot about the issues, right? So, they identify more with the Democrats, they don’t know too much about the policy ideas... I’m not just saying this because I’m saying it. There’s evidence behind it.*” (TYT, 02:37–02:54)⁶

⁴ It does coincide with a distinguishable prosody, but this is quite distinct from the established focus intonation.

⁵ This epistemic relationship is formalized as an epistemic necessity modal \square . The inclusion of this modal in the semantic formula is required to derive the correct truth conditions—for example, utterances of unexplanatory *just* are felicitous when the speaker follows up with a proposed explanation. For more details on the argumentation for this modal operator, refer to Wiegand (2017).

⁶ The Young Turks. 4/19/2016. *Voting for the Lesser of Two Evils*. Youtube. <https://www.youtube.com/watch?v=KrzS0Wb5eYg>. Web. Accessed 4/22/16.

As (14) demonstrates, it is felicitous for the *because*-clause in overt cases of *just* quantifying over an explanation to be simply a restatement of the eventuality being explained. Furthermore, the highlighted sentence in (14) is virtually indistinguishable from one without the overt *because* clause, shown in (15).

(15) I'm not just saying this. There's evidence behind it.

So, it seems logical to conclude that the covert CAUSE₀ could be as minimal as the prejacent itself. In any case, it is clear that the cause need not be informative. Given the utterance in (11), we get the following derivation and resulting paraphrase in (16).

(16) Utterance: The lamp just broke.

e: the event of the lamp breaking

$C = \{e \square \text{because } x \mid x \text{ is a contextually salient potential cause for } e\}$

$\phi = e \square \text{because CAUSE}_0$, where CAUSE₀ is some "minimal cause"

$\llbracket \text{EXCL}(\phi) \rrbracket = \lambda w. \forall q (q \in C \wedge w \in q) \rightarrow \phi \leq q$

Resulting Paraphrase: "For all explanations $q = \textit{The lamp broke necessarily because } x$ that are not entailed by $\phi = \textit{The lamp broke necessarily because CAUSE}_0$, $q \notin w$."

Given the introduction of these covert causation relationships into the representation of the propositional complement of exclusives, we can account for the exclusive nature of unexplanatory *just* without positing additional polysemous lexical entries for *just*. We will still need to explain why other exclusives like *only* do not allow covertly triggered alternatives, which will be discussed further in §4. Additionally, in the following section I will argue that this phenomenon of covert modification seems much broader than causes, even for English *just*.

3.2. Beyond unexplanatory *just*

While the analysis of unexplanatory *just* as an application of the semantics for [EXCL] is fairly straightforward, this framework of allowing covert modifiers could apply to a much wider array of behavior. And in fact, we do see that *just* can be used in numerous environments, not all of which are easily classified as unexplanatory, and some of which are definitively not.

First, there are examples of utterances that are ambiguous between an unexplanatory reading and another type of covert quantification; the following example could also be analyzed as a consequence.

(17) You can't just hit someone.

In the unexplanatory reading discussed in the previous section, this would be interpreted as 'you can't just hit someone for no reason'; however, an alternate reading exists. An utterance of (17) could also be interpreted as 'you can't just hit someone and get away with it', where the alternatives are varieties of consequences for hitting someone, rather than causes or reasons. Either follow-up is felicitous, and the second would simply require a different kind of covert modifier. There are different varieties of these kinds of ambiguities as well; consider the variant of (7c), given below as (18).

(18) He started seeing an ex-girlfriend and just stopped texting me.⁷

As discussed earlier, with the right context, the utterance *he just stopped texting me* can be read with the unexplanatory reading where the speaker does not know why he stopped texting, but it can also be read as in (18) as a lack of adherence to social norms. Under this second interpretation, the subject stopped texting the speaker without going through the proper/expected ritual of explaining why. Admittedly, this is a very minute distinction from the proposed unexplanatory reading, and it is still quite clearly a quantificational denial. However, this is not a quantification over explanation relationships, but rather over manners of completing an action. To see this more clearly, consider the following uses of *just* that could be analyzed in a similar way.⁸

⁷ Thanks to Mats Rooth for highlighting this possibility.

⁸ Thanks to Todd Snider for talking through these examples with me.

- (19) a. The priest gave Charlotte her communion wafer and she just ate it!
 b. John got a phone call in the middle of the meeting and he just got up and left!

In both of the above examples, while they are similar in tone to what I have called unexplanatory *just*, it would be difficult to argue that they constitute any kind of denial of cause. This is especially true in (19b), where it is fairly clear that the reason for walking out of the room was the phone call. On the other hand, they do both indicate that the agent of the action did something socially unacceptable or odd. I would argue that these are examples of *just* quantifying over a prejacent with a covert manner element, which we could call *MANNER*₀. The result is the assertion that the subject performed the action in a minimally acceptable manner, i.e., did not perform the usual ‘extra’ actions, such as exhibiting reverence in a religious ceremony or apologizing for leaving a meeting.⁹

In addition to the ambiguous cases listed above, there are also a host of uses of *just* that have been previously addressed in the literature, which I will argue can be captured in this framework of covert quantification. One such use has been called ‘emphatic’ *just* (Lee, 1987, 1991; Kishner & Gibbs, 1996). It has also been analyzed as an extreme degree modifier, alongside *flat-out*, *downright*, *simply*, etc. (Morzycki, 2012; Beltrama, 2016). Some examples are shown below in (20).

- (20) Emphatic/EDM *just*
 a. It was just impossible!
 b. That fish was just gigantic!
 c. That roller coaster was just incredible!

This use is generally restricted to extreme predicates, as we can see in the following contrast in (21), where *just* is felicitous with the extreme predicate *gigantic*, but anomalous with the non-extreme *big*.

- (21) a. That fish was just gigantic!
 b. # That fish was just big!¹⁰

Uses like this one have been classified as emphatic, yet there is evidence that it does not pattern with other intensifiers like *very*. In fact, they seem to often be in complementary distribution, as shown below.

- (22) a. # Godzilla is very gigantic.
 b. Godzilla is very big. (Beltrama, 2016:80)

The behavior of this use of *just* (and other EDMs) has been analyzed as a metalinguistic intensification (Beltrama, 2016). Interestingly, the analysis of *just* as an EDM involves alternatives and quantification over those alternatives. Alternatives in such a framework are either lexical or pragmatic alternatives to the word choice in the prejacent. However, while I agree with the intuitions, I argue that we can capture this in a manner parallel to the treatment of unexplanatory *just*.

⁹ Interestingly, unlike the true unexplanatory examples, these uses also do not generally come with a suddenness, or mirativity inference. As such, they cannot be substituted with *suddenly* and end up with a roughly synonymous interpretation. Rather, the inclusion of *suddenly* actually forces an additional unexplanatory inference, in essence divorcing the actual cause for the action from the presented explanation.

Additionally, while it follows quite nicely from the pragmatics of explanations, the suddenness inference that so often coincides with unexplanatory *just* is also worth discussing in its own right. For one thing, it also seems that an unexplanatory inference comes up with many uses of the adverb *suddenly*.

- (1) I was sitting there and the lamp suddenly broke!

This use does seem to come with the additional inference that the speaker, at least at the reference time, does not know what caused the lamp to break. However, I would argue that this is clearly an implicature, as it is defeasible.

However, the fact that unexplanatory assertions come with mirative implicatures and vice versa is intriguing. I would argue that we can test for unexplanatory *just* through the use of a replacement test with *suddenly*.

¹⁰ There actually is a reading where this *just* is felicitous, but it is more difficult to get than with the extreme predicates.

Rather than covert minimal causes, emphatic/EDM uses of *just* quantify over covert minimal degrees of deviation from the truth of the extreme predicate. This also captures the pragmatic/metalinguistic effect of negating the less extreme lexical alternatives resulting in the paraphrase “x and that’s all I need to say” observed in Beltrama (2016). Essentially, the restriction on the degree of deviation, formalized as pragmatic slack, entails that less extreme alternatives are insufficient.

I propose that this use involves a covert slack operator (Lasersohn, 1999) over which *just* quantifies. In Lasersohn’s framework, every expression has a pragmatic halo, or degree of acceptable variation from the literal meaning, and slack regulators can widen or restrict that halo. So, given such a framework, we can say that EDM *just* behaves much like a slack regulator in that it restricts the pragmatic halo to some minimal degree of deviation, which we can call $SLACK_0$.

This might explain the restriction to extreme predicates, since the exclusive would require some precise value that it could restrict the slack to. However, with the right context and prosody, almost every non-extreme predicate example can be used with this *just*.

Utilizing covert modifiers allows us to capture the similarities between ordinary exclusives and quantification over these more pragmatic alternatives. Additionally, as we saw with the ambiguous cases earlier, the line is blurry between this EDM use and the unexplanatory use. Consider utterance (23).

(23) I just love your necklace!

This utterance could be used to express lack of (knowable/accessible) cause for the love, and therefore classified as the unexplanatory use of *just*. However, it also results in the pragmatic emphatic effect of EDM *just*, and therefore is also potentially analyzed as a slack quantifier. While this does make distinguishing these non-traditionally exclusive uses of *just* from one another more difficult, this gradient indicates an underlying structural similarity between unexplanatory *just* and EDM *just*.

Once we introduce these kinds of covert degrees, it is also possible that we will be able to capture the remaining categories of polysemous meanings of *just* even further removed from the ordinary exclusive meaning. One such category is what has been called the specificatory use of *just*, shown below in (24).

(24) Specificatory (Spacial/Temporal) *just*

- a. I’m just finishing my homework.
- b. I’ve just heard that you are leaving us. (Lee, 1987:390, ex. 72–73)
- c. You have something just below your eye.

The examples in (24) could easily be captured if we encode covert temporal and spacial degree modifiers as accessible elements for variation in alternative sets over which this use of *just* can quantify.

There is evidence from unexplanatory *just*, along with the extension to EDM *just* and the fine-grained ambiguities discussed above, that covert modifiers should be represented in the preajacent of exclusive operators. Including these covert modifiers in the theory of alternatives allows us to unify some of the uses of *just* under the general notion of an exclusive operator. The following section will address the question of why *only* and other ‘traditional’ exclusives are not licensed to quantify over these covertly triggered alternatives.

4. Focus Restriction and the generalization of alternative sets

Allowing for quantification over alternatives derived from covert modifiers can account for the range of uses of operators like *just* with a common core exclusivity. However, generalizing to this extent has ramifications on standard views of alternative semantics and association with focus. In particular, as discussed earlier, most theories of alternatives in relation to exclusive operators require that alternative sets be subsets of the focus alternatives (Rooth, 1992).

This Focus Principle does seem to hold for the more traditional uses of exclusives, as exemplified by *only* and *merely* in English. As such, I argue that these exclusives are restricted to contexts where the alternative set is derived via focus association. In other words, operators like *only* require the trigger for their alternative set to be overt (and under focus).

We can capture this distinction by positing another morphosemantic restriction like [M] which requires overt alternative set triggers/association with focus. The simplest way to encode this is to reformulate the Focus Principle as a lexical requirement of words like *only*, which I have given below in (25) as a focus restriction (FR) constraint.

$$(25) \quad \llbracket \text{FR} \rrbracket = \lambda F. \lambda K. \lambda q. [F(K)(q) \wedge \partial(K \subseteq \llbracket q \rrbracket^F)]$$

This operator takes an exclusive as its argument and returns a prerequisite that the alternative set the exclusive quantifies over is a subset of the focus alternatives of the prejacent. Given this [FR] operator, we can represent *only* as the composition of the core exclusive entry [EXCL] with this focus restriction operator. The composition of [EXCL] with [FR] is provided below in (26)

(26) *Only*: Composition of [EXCL] and [FR]:

$$\begin{array}{c}
 \lambda w. \forall q [(q \in C_{\leq} \wedge w \in q) \rightarrow \phi \leq q] \wedge \partial(C_{\leq} \subseteq \llbracket \phi \rrbracket^F) \\
 \swarrow \quad \searrow \\
 \lambda r. \lambda w. \forall q [(q \in C_{\leq} \wedge w \in q) \rightarrow r \leq q] \wedge \partial(C_{\leq} \subseteq \llbracket r \rrbracket^F) \quad \phi \\
 \swarrow \quad \searrow \\
 \lambda K. \lambda r. \lambda w. \forall q [(q \in K \wedge w \in q) \rightarrow r \leq q] \wedge \partial(K \subseteq \llbracket r \rrbracket^F) \quad C_{\leq}(\phi) \\
 \swarrow \quad \searrow \\
 \text{EXCL} := \lambda C_{\leq}. \lambda p. \lambda w. \forall q [(q \in C_{\leq} \wedge w \in q) \rightarrow p \leq q] \quad \text{FR} := \lambda F. \lambda K. \lambda r. [F(K)(r) \wedge \partial(K \subseteq \llbracket r \rrbracket^F)]
 \end{array}$$

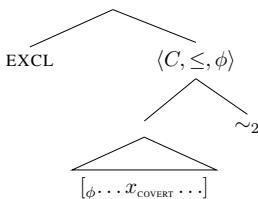
Merely would then be the result of the above composition further composed with [M], since it is required to associate with a focused element in addition to its presupposition on the type of scale.

The inclusion of the [FR] constraint allows us to constrain the availability of covert elements such that operators like *only* and *merely* are not incorrectly predicted to behave like *just*. However, this alone is not sufficient to account for the behavior of uses like unexplanatory *just*. Without the focus semantic machinery, we have no way of associating the covert elements with the variation in the alternative set.

To accomplish this, I propose a generalization of what it means to be an alternative set for exclusive operators. Essentially, exclusive operators require three components in addition to their prejacent: a set of propositions, an ordering over that set, and a distinguished syntactic element that varies with other elements of the same semantic type (cf. Fox & Katzir (2011)).

In the case of ordinary association with focus, the distinguished syntactic element is the focused element, and the restriction to focused elements is covered by the [FR] morpheme. However, I will argue that \sim is better thought of as an operator that constructs an alternative set, rather than enforcing an anaphoric relationship with one as posited in Rooth 1992.¹¹ When the distinguished element is a covert modifier, then a corollary to the \sim operator in Rooth 1992 is introduced. This operator, \sim_2 , builds the alternative set C based on the covert distinguished syntactic element. The schema and construction rule for \sim_2 are shown in (27) and (28) below.

(27) Schema for introduction of covert modifiers¹²



$$(28) \quad \sim_2: C \subseteq \{q = \phi[x/y] \mid y \text{ is the same category and type as } x\}$$

When covert elements are represented, they are required to be the distinguished element. This results in a parallel mechanism for derivation of focus alternatives and covert alternatives.

¹¹ This anaphoric relationship will need to be re-encoded for the purposes of general focus semantics.

¹² Under this framework, the scale on \leq on C is provided by the context rather than built by \sim_2 ; it is included here because it is a necessary argument of [EXCL].

5. Remaining issues

5.1. Interaction with quantifiers

Some additional evidence for analyzing extreme degree modifier *just* as an exclusive operator comes from its interesting behavior when it modifies the quantifier *any*. It seems that *just* can be used to force a low scope universal with respect to other operators, such as negation and modal operators. Consider the contrast between the following examples in (29).

- (29) a. He can't lift anything. $\neg\exists = \forall\neg$
 b. He can't lift just anything. $\neg\forall$

In (29a), with ordinary intonation, this statement is interpreted with the universal outscoping negation, resulting in the paraphrase 'there is nothing he can lift'. In (29b), on the other hand, the addition of *just* before *anything* requires that the universal stay low with respect to negation, with the resulting paraphrase 'it is not the case that he can lift any (given) thing' (with free choice *any*).

Obviously, this use of *just* is not traditionally exclusive. And predictably, this behavior is not available to other exclusives like *only*; attempting to modify *any* with *only* is completely anomalous regardless of the context, as shown in (30).

- (30) # He can't lift only anything.

However, it is available with *simply* and other intensifiers/slack regulators like *absolutely*.

- (31) a. He can't lift absolutely anything $\neg\forall$
 b. He can't lift simply anything $\neg\forall$

This scope-blocking behavior actually fits nicely with the analysis of these uses of *just* as exclusive. It has been noted that exclusive operators can block certain scopal relationships. For example, in Japanese, *dake* 'only' blocks distributive readings of possessors, and can also be observed in English for quantifier-raising out of focus domains (Erlewine, 2011).

An exclusive semantics for *just* could explain why the universal *any* must take low scope with respect to negation, as quantifiers cannot scope out of the focus semantic value (which can be generalized to the distinguished element) of exclusive operators. It also corresponds to the fact that *just* patterns so closely with emphatic adverbs like *absolutely* and *utterly*, as they have been analyzed as slack regulators.

This line of inquiry is one that remains to be fully developed; however, it shows promise in unifying the uses of *just* under a single general semantics for exclusive operators. In order to use this data definitively, we will need to look more closely at the behavior of *any* and the interaction *just* plays in distinguishing between the negative polarity and free choice uses.

5.2. Metalinguistics and expressivity

My framework for the contribution of *just* has been truth-conditional. However, it seems clear that *just* is also contributing some expressive content. This can be seen in examples where it behaves like a discourse marker. It can exhibit concord behavior, as in (32).

- (32) The legislators didn't just₁ change the word because they just₂ felt like it.¹³

Here *just*₁ and *just*₂ contribute the same truth-conditional content; in fact, both seem to be clear examples of unexplanatory *just*. However, when we try to compose them with two instances of *just*, we would get the wrong truth-conditions. This is fairly common for discourse markers, where the expressive content can be repeated or reinforced. The fact that this seems to occur for covert uses of *just*, even those as clearly truth-conditional as unexplanatory *just*, indicates that *just* may be living a dual life as propositional operator and discourse marker.

¹³ This example was produced in a graduate research workshop presentation at Cornell (on the topic of ambiguity in a perjury statute), given by Sarah D'Antonio on 3/8/2016, and reproduced here with her permission.

Just has also been analyzed as a metalinguistic device (Beltrama, 2016). Despite my compositional treatment of *just*, I do think that it can be used in non-truth-conditional ways. However, its expressive content follows the semantic structure of [EXCL]. It is possible that this can give us insight into the diachronic development of discourse markers as extensions of semantic content to the pragmatic domain.

6. Conclusion

This paper has provided a morphosemantic representation of exclusive operator variation where all exclusives are represented in terms of their common meaning [EXCL]. Distributional restrictions are represented in terms of morphological presuppositions like [M] and [FR], the lack of which accounts for the wider range of uses for operators like *just*.

I have detailed some of these broader uses of *just* as an exclusive operator, including unexplanatory *just* and extreme degree modifier *just* and their quantification over covert alternatives. Showing that these uses of *just* behave as exclusives provided evidence that the (prosodically-oriented) Focus Principle may not apply to all exclusives. It is possible that prosodic focus as described in the Focus Principle is a reflex of a larger constraint on alternative sets, as alluded to in the similarities between \sim and \sim_2 .

The extension to pragmatic slack regulators in the analysis of extreme degree modifier *just* raises questions about the line between semantics and pragmatics, as it requires encoding pragmatic inferences in the formal semantics. However, these kinds of pragmatic loosening and widening operators have been argued to be semantically encoded by numerous accounts. So, if they are independently necessary, then it makes sense that they would be available for modification by an unrestricted operator like *just*. The presence of pragmatic information in the semantics could also explain the rhetorical effects (emphasis, surprisal, distancing) that *just* often indexes.

Future work should include some other uses of *just*, as well as exclusives cross-linguistically, within this framework. *Simply* occurs in the same places as the ‘discourse-sensitive’ *just* I have described, so it is possible that *simply* is constrained to only occur with ‘internal’ alternatives triggered by covert elements. Additionally, there is more work to be done constraining the availability of covert elements for quantification. My current hypothesis is that these covert elements correspond to specificational entailments of eventualities and discourse (e.g., every event has a cause, effect, time, location; every attribute has a degree of deviation/pragmatic halo). It is these entailed entities that are allowed to have overt representations in the semantics when they are directly related to the question in the discourse (Roberts, 2012; Simons et al., 2016).

Lastly, the reanalysis of \sim as producing a structured alternative set rather than enforcing an anaphoric relationship will require re-introducing that relationship when dealing with focus semantics outside of exclusive operators. Overall, this analysis captures the structural and expressive similarities of exclusivity across operators and contexts, and furthers inquiry into the relationship between focus semantics and the derivation and generation of propositional alternatives.

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