

# Broadening alternative semantics: Exclusivity of discourse *just*<sup>1</sup>

LSA Annual Meeting

Sunday, January 8, 2017: Scalar Semantics Session

Mia Wiegand, Cornell University

jrww369@cornell.edu

.....

## 1 Overview

### 1.1 Main goals

- Describes and analyzes new data involving English *just*: **unexplanatory *just***
  - (1) I was sitting there and the lamp **just** broke! (suddenly/unexpectedly)
- Argues that unexplanatory *just* is an exclusive operator (like *only*)
  - Unexplanatory *just* quantifies over alternatives of causation
  - This will require expanding our view of alternative sets for exclusive operators
- Utilizes the Question Under Discussion (QUD) framework to constrain these alternatives
  - Specifically, unexplanatory *just* is licensed when the QUD includes a *why* question

### 1.2 Roadmap

§2: Introduction to the data and existing analyses of exclusives

§2.1: Brief description of the new data with unexplanatory *just*

§2.2: General overview of ordinary exclusive operators and their semantic analyses

§3: Analysis of unexplanatory *just* as an exclusive operator over causation relationships

§3.1: Details of the structure of the alternative set for unexplanatory *just*

§3.2: The QUD framework and its applications for broadening alternatives

§4: Concluding remarks on the costs, benefits and consequences of this analysis

Note: This talk is primarily concerned with a small subset of the many uses of the word *just*. See Appendix A for discussion of some of the other uses

## 2 Data

### 2.1 Unexplanatory *just*

- Unexplanatory *just* is used to distance the speaker from explanation, cause or reason for the eventuality described

---

<sup>1</sup>Special thanks to my committee chairs Mats Rooth and Dorit Abusch, as well as to John Whitman, Sarah Murray, and my friends and colleagues in the Cornell Semantics Reading Group for their comments and advice at various stages of this project.

(2) 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 here is that for (2a) the speaker does not know what caused the lamp to break
    - This can be used for a variety of effects (suddenness, denial of fault, etc.)
  - This use contrasts with 'ordinary' *just*, where it behaves like *only/merely*
    - The meaning is significantly different (does not mean "the lamp broke and nothing more")
    - Unexplanatory *just* does not associate with prosodic focus the way that ordinary *just* (and *only*) does

**2.2 *Just* as an ordinary exclusive operator**

- *Just* ordinarily can behave as an exclusive operator, synonymous with *only*
- As such, it associates with a focused element in the prejacent, with different truth conditions:
  - (3) a. Bill only introduced John to [Sue]<sub>F</sub>. (Rooth 1992)
  - b. Bill just introduced John to [Sue]<sub>F</sub>.  
→ Bill introduced John to Sue and Bill did not introduce John to anyone other than Sue.
  - (4) a. Bill only introduced [John]<sub>F</sub> to Sue.
  - b. Bill just introduced [John]<sub>F</sub> to Sue.  
→ Bill introduced John to Sue and Bill did not introduce anyone else to Sue.
- It can also be used in the same contexts as *merely*, where it has a 'depreciatory' connotation (Lee 1987)
  - (5) a. He's merely an employee, not a manager.
  - b. He's just an employee, not a manager.  
→ He is an employee and nothing more important than an employee (says nothing about unrelated attributes, e.g., father, Scientologist, etc.)
- In these uses, *just* (and other exclusives) exhibit a two-part meaning (Rooth 1985, 1992; Beaver & Clark 2008; Coppock & Beaver 2011a; Orenstein 2015):
  - The prejacent/'positive' meaning: The implication that the sentence (without *just*) is true at *w*, the world of evaluation
  - The quantificational/'negative' meaning: The implication that every salient alternative proposition is false at *w*

- The quantificational part of the meaning involving the alternative set is the primary focus of this inquiry<sup>2</sup>
- I posit the following lexical entry for exclusives (including *just*), following Rooth 1985, 1992; Beaver & Clark 2008; Chierchia 2013, among others

$$(6) \quad \llbracket \text{EXCL } \phi \rrbracket^{M,w} = \forall q[(q \in \text{ALT} \wedge w \in q) \rightarrow \phi \leq q]$$

- In (6) above, ALT represents an alternative set, and  $\leq$  a corresponding ordering on ALT
  - The ordering is ordinarily an entailment ( $\subseteq$ ) relation, though it can also be a non-entailment ordering, resulting in the ‘scalar’ reading (Beaver & Clark 2008; Coppock & Beaver 2011a,b)
  - $\leq$  should be read as “is stronger than”, according to whichever ordering it refers to
- So, exclusive operators quantify over elements in an alternative set and assert that there is no true element in that set that is stronger than the prejacent
- This semantic entry is not applicable to the examples of unexplanatory *just* without some modification
  - For one thing, *only* cannot be substituted for *just* in these constructions

- (7) a. # I was sitting there and the lamp only broke!  
 b. # He only stopped texting me (I don’t know why).

- Additionally, the Focus Principle (Rooth 1992) states that alternative sets must be subsets of focus alternatives
  - But unexplanatory *just* does not require association with focus
- In terms of intuitive meaning, ‘The lamp just broke’ does not seem to be paraphrasable as ‘The lamp broke and nothing more’
- However, I will argue in §3 that unexplanatory *just* can still be represented as an exclusive

## 3 Analysis

### 3.1 Alternatives for unexplanatory *just*

- While unexplanatory *just* clearly yields a different interpretation than ordinary exclusives, it can still be reduced to a quantificational denial
  - Specifically, if we encode causation/explanation relationships as accessible entities for quantification, unexplanatory *just* can be analyzed as a negation of causes
- Consider the simplified sentence in (8)

<sup>2</sup>The status of the prejacent as asserted/presupposed/implicated has been widely discussed in the literature. See Roberts 2011 for relevant discussion.

(8) The lamp just broke.

- Under the unexplanatory reading, the speaker indicates with *just* that she is unaware of the cause of the lamp breaking
  - This can be seen in the fact that this implication can be targeted with negation
  - Consider the following exchange between, for example, a parent (A) and child (B), where the parent has walked into a room and discovered a broken lamp on the floor.

(9) 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/why the lamp broke
- In the last line, speaker A is negating the implication that the lamp broke for no reason
- Unlike the alternative sets for ordinary exclusives, the causal relationship is not explicitly denoted in the sentence, much less marked with focus intonation
  - I argue that causation relationships are available for quantification due to the information structure of conversations
  - In particular, they are available when the question of *why* is part of the current question of inquiry
  - When they are available, a covert minimal cause, which I label CAUSE<sub>0</sub> is filled in as the trigger for the alternative set
    - This minimal cause is necessary to avoid undesirable results like asserting that something has no cause, contrary to most views of how the physical world works
    - Furthermore, there is evidence that redundant information can be included in these constructions

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

- Given this, it seems logical to conclude that the minimal cause could be as minimal as the prejacent itself
  - These covert causes can be seen as parallel to the covert modifiers posited in Orenstein 2015 for Hebrew accented *stam* 'merely/just'
- However, the quantification is not a flat denial of the existence of a cause for the prejacent
  - Utterances using unexplanatory *just* can be followed up with proposed causes

(11) He just stopped texting me. Maybe it's because I made that quip about his mother.

- Importantly, it does seem that modalized answers like (11) do seem better than pure assertions of the cause

(12) He just stopped texting me. ??It's because I made that quip about his mother.

- To account for this, I propose that the causation relationships are themselves modalized with an epistemic necessity modal

– So the alternative set for (8) would look like the following:

(13)  $ALT = \{\text{The lamp broke } \Box CAUSE_0, \text{The lamp broke } \Box(\text{because the cat knocked it down}), \text{The lamp broke } \Box(\text{because the wind knocked it over}), \dots\}$

- A similar effect can be seen in the interaction with propositional anaphors targeting propositions involving unexplanatory *just*

(14) If the electronic device just stops working, bring it back and we will repair or replace it. Otherwise, you'll have to buy a new one.

– Here, *otherwise* refers to the proposition ‘the electronic device just stops working’

– The meaning of (14) is that if the electronic device stops working for no apparent reason, the customer may bring it back, but if the customer is responsible for the failure, they must buy a new one

### 3.2 QUD framework

- Roberts 2012; Simons *et al.* to appear define the question under discussion as an alternative set, and furthermore, requires that utterances address the QUD in order to be relevant

– Focus alternatives (Rooth 1992), under such a framework, are restricted to correspond to the QUD

– So, I argue that *just* can access the alternatives provided by the QUD without associating with a prosodically focused element

– The reason for this is that it quantifies over alternatives that relate to discourse coherence and event structure

(15) Utterance: The lamp just broke.

*e*: the event of the lamp breaking

QUD: What caused the lamp to break?

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

$\phi = e \Box \text{because } CAUSE_0$ , where  $CAUSE_0$  is some “minimal cause”

$\llbracket \text{just}(\phi) \rrbracket^{M,w} = \forall q(q \in ALT \wedge w \in q) \rightarrow \phi \leq q$

Resulting Paraphrase: “For all explanations  $q = \text{The lamp broke necessarily because } x$  that are not entailed by  $\phi = \text{The lamp broke necessarily because } CAUSE_0$ ,  $q \notin w$ .”

- This framework correlates with the felicity of unexplanatory *just* in answers to *why* questions

(16) a. A: Why did Alison walk backwards all day?

B: She just did!

b. A: Why do you like Buffy the Vampire Slayer so much?

B: I just do! (I don't care to tell you/I don't know)

- Note that without the *just*, these responses are quite anomalous, as they are uninformative
  - (17) a. A: Why did Alison walk backwards all day?  
B: #She did!
  - b. A: Why do you like Buffy the Vampire Slayer so much?  
B: #I do!
- However, the responses in (16) actually are informative, in that they negatively quantify over reasons for the questioned content
- I argue that discourse relations like explanations and elaborations (Asher & Lascarides 2003) are added to the QUD stack by default in narratives (and some other contexts)
  - This means that the *why* question does not need to be overtly asked for unexplanatory *just* to be licensed
  - All that is required is that an explanation for the eventuality *just* modifies would be expected in the discourse
  - This is why ‘I was sitting there and the lamp just broke’ seems more natural out of the blue than simply ‘The lamp just broke’
    - What matters is that *why* the event occurred is seen as relevant to the discourse goals in a clearly narrative context (‘I was sitting there and...’)

## 4 Concluding remarks

- In this talk, I have detailed a particular use of *just*: unexplanatory *just*
  - I have argued that despite its differences from ordinary exclusives, it can be analyzed with an exclusive semantics
    - Doing so has the added benefit of not positing a multitude of similar entries for *just* in the lexicon
- This requires broadening our notions of alternative sets (particularly with respect to focus alternatives and their interactions with exclusive operators)
  - This allows covert modifiers (of causation) to vary the alternative set
  - The structure of the alternative set is constrained by discourse, specifically the QUD
- I utilize machinery that has been argued to be necessary elsewhere to constrain the kinds of alternatives available for quantification by *just*
- By appealing to the QUD, we can work toward explaining the intimate relationship between focus and questions
  - Focus intonation may be constrained by the QUD; however, alternatives may be derived without the presence of overt focus marking
    - Unexplanatory *just* obviously cannot associate with focus, as the element in the sentence giving rise to the alternatives is not overtly represented in the utterance

- But, I argue that the means by which it associates with its alternatives is parallel to that for focus in terms of congruence to the QUD
- Once we allow these broader alternative sets, we must explain why only some exclusives can target them (e.g., why *only* does not exhibit the same behavior as *just*)
  - I argue that this must be lexically encoded in the exclusive as selectional requirements on the alternative set<sup>3</sup>
    - This type of subcategorization has been posited for other exclusives to account for the distinction between, e.g., *only* and *merely* (Coppock & Beaver 2011a; Orenstein & Greenberg 2010)
- Future work on this topic will include some other uses of *just*, as well as exclusives cross-linguistically, within this framework

## References

- Asher, Nicholas, & Lascarides, Alex. 2003. *Logics of Conversation*. Cambridge, UK: Cambridge University Press.
- Beaver, David, & Clark, Brady Z. 2008. *Sense and Sensitivity: How Focus Determines Meaning*. Vol. 12. John Wiley & Sons.
- Chierchia, Gennaro. 2013. *Logic in Grammar: Polarity, Free Choice, and Intervention*. Oxford: Oxford University Press.
- Coppock, Elizabeth, & Beaver, David. 2011a. Mere-ology. *Alternatives in Semantics*.
- Coppock, Elizabeth, & Beaver, David. 2011b. Sole sisters. *Pages 197–217 of: Proceedings of SALT*, vol. 21.
- Kishner, Jeffrey M, & Gibbs, Raymond W. 1996. How “just” gets its meanings: Polysemy and context in psychological semantics. *Language and speech*, **39**(1), 19–36.
- Lee, David. 1987. The semantics of *just*. *Journal of Pragmatics*, **11**, 377–398.
- Orenstein, Dina. 2015. A family of exclusives in Hebrew. *Pages 96–106 of: ESSLLI 2015 Student Session*.
- Orenstein, Dina, & Greenberg, Yael. 2010. The semantics and focus sensitivity of the Hebrew (unstressed) *stam*. *In: Proceedings of IATL*, vol. 26.
- Roberts, Craige. 2011. Only: A case study in projective meaning. *Baltic International Yearbook of Cognition, Logic and Communication*, **6**(1), 1–59.
- Roberts, Craige. 2012. Information structure in discourse: Towards an integrated formal theory of pragmatics. *Semantics and Pragmatics*, **5**(6), 1–69.
- Rooth, Mats. 1985. *Association with focus*. Dissertation, University of Massachusetts.

<sup>3</sup>This will be discussed in an upcoming talk/paper presented at BLS 43

Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics*, 1(1), 75–116.

Simons, Mandy, Beaver, David, Roberts, Craige, & Tonhauser, Judith. to appear. The Best Question: Explaining the Projection Behavior of Factives. *Discourse Process*.

## A Other uses of *just*

- Many uses of *just* have been discussed in the literature
  - Only some of these are relevant for this talk
- (18) Specificatory *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.
- (19) Exact *just*
  - a. Just where do you think you're going? (Kishner & Gibbs 1996: 19, ex. 5)
  - b. I want to know just how he got in here.
- (20) Comparative *just*
  - a. I love cookies, just as you love cake. (Kishner & Gibbs 1996: 19, ex. 6)
  - b. Just like the previous example, this is an example of comparative *just*.
- (21) 'Emphatic' *just*
  - a. I just love your necklace!
  - b. I had so much milk it was just incredible.
  - c. The sisters just couldn't believe it.
  - d. It was just impossible. (Lee 1987: 393–4)
- The ultimate goal of the project is to combine as many of these uses as possible within a single semantic analysis
  - We would need to further broaden the kinds of alternatives available for quantification
  - This move needs to be constrained in a systematic way to avoid overgeneration beyond the exclusive uses we see in natural language