A close look at *just* and how to derive intensification effects from exclusivity

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Day 4
The semantics and pragmatics of intensification
ESSLLI 2017

Background: Goals of my research

- Formalizing a common semantics accounting for the uses of all exclusive operators
- Explaining the differing meanings and distributions of those operators
- Specifically, focusing on *just* and its wide array of uses

Tying it to intensification:

- Rather than analyzing *just* as an intensifier independently, I will show a general account of how we can derive intensification from this broad notion of exclusivity

Roadmap

- Background on exclusivity
- In-depth look at one use of *just* (unexplanatory) & how to analyze it
- Discussion of why it's desirable to extend the analysis to intensification
- Brief overview of two possibilities for extension
- Some remaining issues

Background: Exclusivity

- Exclusives can generally be paraphrased by
  "X and no more than X"

  (1) Bill only has $[2]_F$ dogs.
      $\rightarrow$ "Bill has 2 dogs and no more than 2 dogs."

- Meaning has two components:
  - Prejacent: usually assumed to be presupposed
  - Quantificational negation of stronger alternatives: asserted

- I posit the following lexical entry for the quantificational part of exclusives (including *just*), following Rooth 1985, 1992; Beaver & Clark 2008; Chierchia 2013, among others

    (2) $[\![\text{EXCL}]\!] = \lambda C_\leq.\lambda p.\lambda w.\forall q[(q \in C_\leq \wedge w \in q) \to p \leq q]$
    (Rooth 1992; Chierchia 2013; Wiegand 2017)

Note: $C_\leq$ represents an ordered pair $\langle C, \leq \rangle$ of an alternative set C, along with an ordering $\leq$ on C
- This is included in order to account for differences between operators like *only* and *merely*
- *Just* is unrestricted on the kind of ordering, so the $\leq$ variable can be filled in as, e.g., $\subseteq$ or a contextually salient scale

- For exclusives, the alternative set is usually analyzed as a subset of the focus alternatives (Rooth 1985, 1992)

(3) Bill only introduced John to [Sue]$_F$.   Rooth (1992)
     $\rightarrow$ Bill did not introduce John to anyone other than Sue.

(4) Bill only introduced [John]$_F$ to Sue.
     $\rightarrow$ Bill did not introduce anyone other than John to Sue.

- Exclusives can also operate on lexical scales

(5) The coffee was merely warm. $\rightarrow$ The coffee was not hot

- These uses still usually occur with a focus intonation on the part of the sentence that is giving rise to the alternatives (*warm* above)

First extended use of exclusivity:
Unexplanatory *just*

Context: Two girls, Cordelia and Harmony, are talking at the top of a staircase. Suddenly, Harmony jerks backwards and falls down the stairs. (It is later revealed that an invisible girl had pushed her.)

(6) Principal Snyder: . . . What happened?
   Cordelia: She fell! She, she, we were standing at the top of the stairs and she **just** fell! All by herself!
   Harmony: No! I was pushed!

   (*Buffy the Vampire Slayer*, S1E11)

(6) Principal Snyder: . . . What happened?
    Cordelia: She fell! She, she, we were standing at the top of
    the stairs and she **just** fell! All by herself!
    Harmony: No! I was pushed!

- Intuitively, *just* is indicating (apparent) lack of cause or
  explanation here

- However, there is no focused element to give rise to an
  appropriate alternative set C
    - The only contender is *fell*, but this doesn't get the right
      interpretation
    - $\neq$ "Harmony only fell"

(6) Principal Snyder: . . . What happened?
   Cordelia: She fell! She, she, we were standing at the top of
   the stairs and she **just** fell! All by herself!
   Harmony: No! I was pushed!

- This also cannot be reduced to intensification
- *Just* is contributing at-issue information
    - It answers the question "what happened" in a context where it is already apparent that Harmony has fallen (i.e., the QUD is referring to the <u>cause</u> of the falling)
    - It can be contested/negated with the assertion of a cause
    - It could not be replaced with *flat-out*, *downright*, *absolutely*, etc. (importantly, *simply* is much better)

Covert sources of alternatives

- Variation previously observed among exclusives: availability of covert elements as the trigger for the alternative set
  - Described in Orenstein 2015 as 'internal' alternatives (Wiegand 2017 as lack of required association with focus)
- Evidence from Hebrew accented *STAM*

(7) 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)

- Resulting paraphrase: 'it's just a plain watch, and not a better kind of watch'

- Orenstein (2015) argues that *STAM* combines with alternatives including covert modifiers of 'watch'
  - 'It's MOD watch', where MOD is interpreted here as 'standard'
- I have argued that unexplanatory *just* can be analyzed in a very similar way (Wiegand 2017)

- If we encode causation/explanation relationships as accessible entities for quantification, unexplanatory *just* can be analyzed as a negation of (stronger) causes
  - This move allows us to keep the semantics for *just* given in (2)

(2) $[\![\textsc{excl}]\!] = \lambda C_\leq.\lambda p.\lambda w.\forall q[(q \in C_\leq \wedge w \in q) \rightarrow p \leq q]$
    (Rooth 1992; Chierchia 2013; Wiegand 2017)

- This requires allowing covert internal modification of the prejacent

- When available, a covert minimal cause, which I label CAUSE_0 is filled in as the trigger for the alternative set

  - This availability is constrained to adhere to the QUD, or possibly a weakened version of the QUD/a framework that allows for fairly widespread accommodation

- CAUSE_0 is essentially a placeholder for the alternatives, and can be interpreted as 'minimally necessary cause'

- So, for a sentence like (8a), we would get the computed prejacent as in (8b) and resulting alternative set C in (8c)

(8)   a. The lamp just broke. (suddenly/unexpectedly)

    b. $\phi=$The lamp broke CAUSE_0

    c. $C = \{$The lamp broke CAUSE_0, The lamp broke because the cat knocked it down, The lamp broke because the wind knocked it over, ...$\}$

There is evidence that these causation relationships need to be modified by an epistemic necessity modal $\square$ to derive all of the correct truth conditions. Feel free to ask me about it if you're interested, but the modal is not necessary to see the general picture.

Overt correlates

- We have evidence from some examples of overt *because* clauses that it is possible to fill in redundant information as a cause or explanation

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

     (The Young Turks, *Voting for the Lesser of Two Evils*, 4/19/2016, 02:37–02:54)

- This sentence is virtually indistinguishable from one without the overt *because* clause

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

  - So, seems logical to conclude that this cause could be as minimal as the prejacent itself

- So, given an utterance of (8a), we get the following derivation and resulting paraphrase

(11)   Utterance: The lamp just broke.
    e: the event of the lamp breaking
    $C = \{e$ because $x \mid x$ is a contextually salient potential cause for $e\}$
    $\phi = e$ because CAUSE_0, where CAUSE_0 is some "minimal cause"
    $[\![\text{EXCL}(\phi)]\!] = \lambda w.\forall q(q \in C \wedge w \in q) \rightarrow \phi \leq q]$
    Resulting Paraphrase: "For all explanations $q = The\ lamp\ broke\ because\ x$ that are not entailed by $\phi = The\ lamp\ broke\ because\ \text{CAUSE}_0$, $q \notin w$."

Interim summary

- For unexplanatory *just*, encoding covert causes allows us to use a standard notion of exclusivity for the semantics of *just*

- Can this be modified to account for intensification effects?
  - Is that even a desirable goal?

- Two viable avenues of approach:
  - Quantification over covert degrees of pragmatic slack
  - Quantification over speech acts

Non-extreme intensification?

- Claim by Morzycki (2012): *just* is infelicitous with non-extreme predicates
- Counterevidence (possible alternate use)

(12)   a. Mark is just {incredible/the best/a fantastic dude}!

        b. Mark is just decent.

(13)   a. That fish is just gigantic!

        b. That fish is just big.

- With the right context/prosody, these middle ground predicates seem fine with *just*

Playing with the at-issueness/negation

- Can you ever negate intensifying *just*+predicate examples in contexts where the predicate is not denied?

(14) A: Most of your answers were just wrong.
      B: #3 wasn't just wrong! The logic made sense, I just made an error!
      $\rightarrow$ Answer #3 was not {obviously/inevitably/etc} wrong, (but it was in fact wrong)

- More often, when these uses are negated, the entire intensified phrase is interpreted under negation ($\neg$(just pred)$\rightarrow \neg$pred)

(15) A: Did you like the movie?
      B: Meh, it wasn't just amazing, but it was okay.
      $\rightarrow$ The movie wasn't amazing

- These cases are marginal, but it's worth looking into

A note on flipping the scale

- It might seem reasonable to argue that the intensifying effect comes from flipping the direction of the scale *just* operates on

  (2) $\llbracket \textsc{excl} \rrbracket = \lambda C_\leq.\lambda p.\lambda w.\forall q[(q \in C_\leq \land w \in q) \to p \leq q]$

  (16) $\llbracket \textsc{excl'} \rrbracket = \lambda C_\leq.\lambda p.\lambda w.\forall q[(q \in C_\leq \land w \in q) \to q \leq p]$

  - This essentially amounts to changing the assertion from '. . . and no more than' to '. . . and no less than'

- This approach can get us roughly the correct semantic intuitions

- However, this is no different than positing two separate uses of *just*, i.e., the ambiguity account

  - Ambiguity is always an option, but there are reasons to want a tighter connection between 'ordinary' and intensifying *just*

Some reasons to extend to intensification

- The line is blurry between this intensification use and the unexplanatory use

  (17)   a. I just love your necklace!

         b. I just feel like it's going to rain.

  - (17a) could be used to express lack of (knowable/accessible) cause for the love, but it also results in the intensification effect
  - There is an intuition that (17a) and (17b) have the same *just*

- Even non-intensification uses seem much broader than causes
  - There are times when it could be quantification over consequences/results

(18) You can't just hit someone.

- Unexplanatory: 'You can't just hit someone for no reason'
- Alternate: 'You can't just hit someone and get away with it'
  - Either follow-up felicitous; the second would require different kind of covert modifier

- There are uses of *just* that seem to indicate "without observation of the usual social expectations"

(19) John got a phone call in the middle of the meeting and he just got up and left!

(20) The priest gave Charlotte her communion wafer and she just ate it!

- These kinds of uses make direct use of social expectations or 'normal' ways of doing things
  - But they are clearly quantificational in the way that unexplanatory *just* is (definitely not intensifying)

- They are also targetable with negation:

(21) A: I heard that John got a phone call in the middle of the meeting and just got up and left!
B: He didn't just get up and leave—he was very apologetic about it!

- (Like we saw with unexplanatory *just*), they can occur in contexts where the alternative set is indicated overtly

(22) I'm not going to say goodbye. If we get through this, I'm **just** going to go.

(*Buffy the Vampire Slayer*, S3E22)

- Despite this, I'd argue that the use in (22) is still not an ordinary exclusive:
  - could not substitute *only* (*simply* seems okay)

- This gradient indicates an underlying structural similarity
  - Where would we draw the line between *just*$_1$ and *just*$_2$?

- We also have an intuition about intensifying uses of *just* that can be paraphrased with the schema for exclusivity:
  - "X and that's all I need to say"
  - "X and that's all there is to it"
  - "...with no need to add anything else" (Beltrama 2016: 84)
  - "It's {just/simply} that X"
  - "I'm just saying X"

- How can we capture this 'high-level exclusivity'?

Pragmatic slack hypothesis

- Rather than covert minimal causes, emphatic/EM 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 contrasting with the less extreme lexical alternatives

  - Essentially, the restriction on the degree of deviation, formalized as pragmatic slack, entails that less extreme alternatives are insufficient

- This use would involve a covert degree of slack, or pragmatic halo, (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
        - Slack regulators restrict or widen that halo
- So, given such a framework, we can say that EM *just* behaves much like a slack regulator in that it restricts the pragmatic halo to some minimal degree of deviation (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*

- 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*
    - One such category is shown below:

(23) 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 (23) might easily be captured if we encode covert temporal and spacial degree modifiers

- Utilizing covert modifiers allows us to capture the similarities between ordinary exclusives and quantification over these more pragmatic alternatives
- Many (if not all) of the covert modifiers we need have been independently posited (discourse coherence relations, slack regulators, covert temporal arguments, etc.)

- Main problem: as we saw earlier, 'emphatic' uses of *just* are not at-issue, not targetable with negation
  - So should we really be putting this in the same domain as ordinary exclusive uses (or even extended uses)?

A speech act quantification analysis?

- Rather than positing covert elements in the prejacent, another analysis involves quantifying over speech acts/speaker commitments
- One ready framework for this is given in Cohen & Krifka 2011
    - They use this to account for superlatives like *at least*/*at most*
- Essentially, some quantifiers can operate above the ASSERT operator
    - Assertions are taken to come with speaker commitments, which puts these commitments into the formal representation (and allows them to be negated)
- This allows *just* to operate over assertions, contrasting with what is not asserted (what is granted)

Some evidence for a speech act analysis

- Implicature/speaker commitment seems targetable with *just*

(24) A: My boss always approaches me at the end of the day
        with work for me to do. It's very frustrating.
        B: That's too bad. But maybe she's been really busy lately
        and other stuff has distracted her.
        A: Well, that's no excuse!
        B: I know, I'm just saying.   (Lee-Goldman 2011: 77)

(25) A: John said Mary owns 2 apartments.
        B: No, that's wrong. She owns 3.
        A: He just said she owned 2. (He wasn't implying she
        didn't own more.)

- It also maps onto intuitions about paraphrases of these uses

Issues with the speech act analysis

- The framework is not fine-grained enough to pick out which implicatures/commitments are being quantificationally negated

- We would still likely need some kind of modal like 'pragmatically necessary' to derive the correct results for 'this is all I need to say' readings

Remaining issues: *Just fine* vs. *just okay*

- Why is it just fine to say *just fine* but not okay to say *just okay* to mean 'just fine'?

(26) A: How are you?
      B: I'm just fine.
      $\rightarrow$ B is fine and no worse than fine.

(27) A: How are you?
      B: I'm just okay.
      $\rightarrow$ B is okay and no better than okay.

(28) A: How are you?
      B: I'm fine.
      A: Just fine?
      B: No, I'm just fine!

Remaining issues: *Just know*

- *Just* messes with *know*'s factivity

(29) It's going to rain. I just know it.

(30) She just knew Hillary was going to win.

- These indicate strong belief, but do not presuppose the truth of their complement
    - The first may indicate lack of complete evidence
    - The second seems to mostly just indicate intensification of the belief

- What is *just* quantifying over here? Lexical alternatives? (Abusch 2002)

- Why would intensifying *know* result in nonfactivity?

Remaining issues: *Just any*

- *Just* exhibits some very interesting behavior when it modifies *any*
    - It seems that *just* can be used to force a low scope universal with respect to other operators

    (31) a. He can't lift anything. $\neg\exists = \forall\neg$

          b. He can't lift just anything. $\neg\forall$

- This behavior is not available to other exclusives like *only*

  (32) # He can't lift only anything.

  (33) A: Can just anyone lift Mjolnir?
        B: No, only Thor can.

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

  (34) 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 (Erlewine 2011)
  - In Japanese, *dake* 'only' blocks distributive readings of possessors
- 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 of exclusive operators

Expressivity & discourse marker status

- 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 (35)

(35) The legislators didn't $just_1$ change the word because they $just_2$ felt like it.

- Here $just_1$ and $just_2$ contribute the same truth-conditional content
  - In fact, if we tried to compose (35) 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

- *Just* has also been analyzed as a metalinguistic device
- 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

Looking forward

- It's clear that there are theoretical motivations to analyze all intensifiers as a class
- However, it's also apparent that exclusivity can be broadened semantically and pragmatically
  - One endpoint of that broadening may be intensification
- I've made a case for analyzing *just*'s intensifying uses as extended exclusivity
  - Its intensification effects and similarity to slack regulators comes from the fact that it is underspecified enough to quantify over pragmatic slack
  - Other intensifiers likely derive their effects through a different mechanism (except *simply*, which will need an analysis very similar to *just*)
- But there's clearly more work to be done!

Thanks for listening!

Email me with comments/suggestions/questions at jrw369@cornell.edu

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