Taking stock of theories of the imperative: Evidence from *just*

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Two readings for imperatives containing *just*

Reading 1:

(1) There's not a whole lot of strawberries left, so **just** take one, okay? (COCA)

a. "Take one strawberry and no more."

Reading 2:

(2) A: Would you like some strawberries?
B: No, you should eat them!
A: Come on, **just** take one!

a. "All I'm asking is that you take one strawberry."

COCA = Corpus of Contemporary American English (Davies 2008–)

Two readings for imperatives containing *just*

- On Reading 1, the speaker commands the addressee not to take more than one strawberry.
- On Reading 2, this upper bound seems to be absent.
- I analyze this contrast as a scope ambiguity between *just* and a speech act operator.
- I argue that the behavior of *just* in imperatives has broader implications for speech act theory:
  - It provides evidence that speech act operators exist.
  - It militates for a preference-based analysis of imperatives like that of Condoravdi & Lauer (2012).

Data
- Reading 1
- Reading 2

Background
- The semantics of imperatives
- The meaning of *just*

Analysis
- A scope ambiguity
- Imperatives

Comparison of theories of imperatives

Future work

The meaning of *just*

The meaning of *just*, like that of other exclusive particles, has been analyzed as having two components: a presupposed "at least" component and an entailed "at most" component (see e.g. Horn 1969, 2000, Beaver & Clark 2008, Coppock & Beaver 2014).

(3) John is just a graduate student.

a. Presupposition: John is at least a graduate student.

b. Entailment: John is at most a graduate student.

(Coppock & Beaver 2014)

Just in imperatives: Reading 1

This upper-bounding effect is also seen in imperatives:

(4) **Just** give me the facts and let me make up my own mind about how I feel. (COCA)
⇝ I request that you give me the facts.
⇝ I request that you give me nothing more than the facts.

(5) **Just** take it as feedback rather than getting all ego-hurt. (COCA)
⇝ I advise you to take it as feedback.
⇝ I advise you not to take it as more than feedback.

(6) **Just** take it one step at a time. (COCA)
⇝ I advise you to take it one step at a time.
⇝ I advise you to take it no more than one step at a time.

In these examples, the speaker directs the addressee to carry out the content of the imperative and not to carry out any stronger alternatives.

Just in imperatives: Reading 2

In other cases, *just* imposes a different kind of upper bound:

(7) **Just** give me five minutes. (COCA)
- $\rightsquigarrow$ I request that you give me five minutes.
- $\rightsquigarrow$ I don't request that you give me more than five minutes.
- $\not\rightsquigarrow$ I request that you don't give me more than five minutes.

(8) **Just** help me pick out a few poinsettias, and we can be on our way to church. (COCA)
- $\rightsquigarrow$ I request that you help me pick out a few poinsettias.
- $\rightsquigarrow$ I don't request that you do more than help me pick out a few poinsettias.
- $\not\rightsquigarrow$ I request that you don't do more than help me pick out a few poinsettias.

Just in imperatives: Reading 2 (continued)

(9) To get started, **just** make an account and download the desktop client. (COCA)
$\rightsquigarrow$ I advise you to make an account and download the desktop client.
$\rightsquigarrow$ I don't advise you to do more than make an account and download the desktop client.
$\not\rightsquigarrow$ I advise you not to do more than make an account and download the desktop client.

In these examples, *just* places an upper bound on the speaker's **public discourse commitments**: It conveys that the speaker is not directing the addressee to do anything more than the content of the imperative.

- In contrast to reading 1, the speaker does **not** commit to the negation of stronger alternatives.

Preferences

Condoravdi & Lauer (2012) analyze imperatives in terms of preferences:

- A preference structure is a partially ordered set of propositions.
  - If p and q are elements of a preference structure with partial order $\leq$, $p \leq q$ means that q is at least as preferable as p.
- Any rational agent at a particular moment has a consistent preference structure called its effective preference structure. This may differ from its actual preference structure, which may be inconsistent.
- An element p of an effective preference structure is a maximal element if there is no other element that is preferred to p.

An imperative commits the speaker to an effective preference.

- By uttering an imperative, a speaker commits to acting as though the content of the imperative is a maximal element of their preference structure.
  - $PEP_w(A, p)$ means 'A is publicly committed at w to act as though p is a maximal element of A's effective preference structure'.
- Condoravdi & Lauer (2012) argue that the imperative meaning in (10) interacts with context to give rise to the various speech acts that imperatives can be used to perform. (In what follows, Sp is the speaker and Ad is the addressee.)

(10) $[\![\text{IMP}]\!] := \lambda p[\lambda w[PEP_w(Sp, p)]]$

Just as an exclusive particle

- Beaver & Clark (2008) argue that an exclusive comments on the strength of its prejacent on a contextually salient scale relative to the other possible answers to the Current Question Under Discussion (CQ).
  - It carries a presupposition that an answer at least as strong as the prejacent is true and an entailment that no stronger answer is true.
  - The CQ can be inferred from the placement of prosodic focus.

(11) CQ: What is John?
A: John is just [a graduate student]$_F$.

a. Presupposition: John is at least a graduate student.
b. Entailment: John is at most a graduate student (i.e., not a post-doc or a professor).

(Coppock & Beaver 2014)

Just as an exclusive particle

The meaning of *just* given by Coppock & Beaver (2014) is shown in (14), where S is an information state representing the context, and CQ_S is the Current Question Under Discussion.

(12) $\quad \textsc{min}_S(p) = \lambda w.\exists p' \in \mathrm{CQ}_S[p'(w) \wedge p' \geq_S p]$

(13) $\quad \textsc{max}_S(p) = \lambda w.\forall p' \in \mathrm{CQ}_S[p'(w) \rightarrow p \geq_S p']$

(14) $\quad [\![\text{just}]\!]^S = \lambda p.\lambda w : \textsc{min}_S(p)(w).\textsc{max}_S(p)(w)$

- MIN corresponds to the presupposed "at least" inference, and MAX corresponds to the asserted "at most" inference.
- It's not immediately obvious whether a CQ can always be inferred from an utterance of an imperative, so in what follows I will replace CQ with the set ALT of focus alternatives (cf. Rooth 1985, 1992).
- The choice of an analysis of *just* is not crucial here, and any other could be substituted.

A scope ambiguity

I argue that the ambiguity between the two readings of imperatives containing *just* is a scopal one (cf. Warstadt 2018).

- On Reading 1, *just* scopes under a speech act operator.
  - MAX conveys that the speaker is committed to an effective preference for the negation of each alternative that is stronger than the prejacent.
- On Reading 2, *just* scopes over the speech act operator.
  - MAX conveys that the speaker is not committed to an effective preference for any alternative that is stronger than the prejacent.
  - But it does not follow that the speaker is committed to a preference for the negation of those alternatives.

Imperatives: Reading 1

Reading 1 is derived as follows, where
$p = \lambda w.Ad$ takes it one step at a time in w:

(15) $[\![$Just take it [one step]$_F$ at a time.$]\!]$
$= \text{IMP}([\![\text{just}]\!]^S(p))$
$= \lambda w.PEP_w(Sp, [\![\text{just}]\!]^S(p))$
$= \lambda w : PEP_w(Sp, \text{MIN}_S(p)).PEP_w(Sp, \text{MAX}_S(p))$

The placement of focus on *one step*, makes the following set of alternatives salient:

(16) $\text{ALT}_S = \{\lambda w.Ad$ takes it one step at a time in w,
$\lambda w.Ad$ takes it two steps at a time in w,
$\lambda w.Ad$ takes it three steps at a time in $w, ...\}$

Imperatives: Reading 1

Thus (15) conveys the following:

- Presupposition: *Sp* is committed to an effective preference in *w* for *Ad* to take it **at least** one step at a time.
- Assertion: *Sp* is committed to an effective preference in *w* for *Ad* to take it **no more than** one step at a time.

Imperatives: Reading 2

Reading 2 is derived as follows, where $p = \lambda w.Ad$ gives Sp five minutes in w:

(17) $[\![$Just give me [five minutes]$_F$.$]\!]$
$= [\![\text{just}]\!]^S(\text{IMP}(p))$
$= [\![\text{just}]\!]^S(\lambda w.PEP_w(Sp, p))$
$= \lambda w : \text{MIN}_S(\lambda w.PEP_w(Sp, p)).\text{MAX}_S(\lambda w.PEP_w(Sp, p))$

The salient set of alternatives is shown in (18).

(18) $\text{ALT}_S = \{\lambda w.PEP_w(Sp, q) : q \in$
$\{...\lambda w.Ad$ gives Sp four minutes in w,
$\lambda w.Ad$ gives Sp five minutes in w,
$\lambda w.Ad$ gives Sp six minutes in w,
$\lambda w.Ad$ gives Sp seven minutes in $w, ...\}\}$

Imperatives: Reading 2

Thus (17) conveys the following:

- Presupposition: *Sp* is committed to an effective preference in *w* for *Ad* to give *Sp* **at least** five minutes.
- Assertion: *Sp* is **not** committed to an effective preference in *w* for *Ad* to give *Sp* **more than** five minutes.
  - Crucially, this does not entail that *Sp* is committed to an effective preference for *Ad* not to give *Sp* more than five minutes.

The existence of an imperative operator

- Researchers have disagreed about whether sentential force is specified by a speech act operator in the denotation of a clause (e.g. Lakoff 1969, Kaufmann 2012, Krifka 2014, Cohen & Krifka 2014, Krifka 2017) or by what Lauer (2015) calls "extra-compositional conventions of use" (e.g. von Savigny 1988, Portner 2004, Lauer 2015, Roberts 2018).
- Condoravdi & Lauer (2012) remain agnostic with respect to this question, showing that commitment to an effective preference can be effected by either an IMP operator in the denotation of an imperative, or the convention in (20).

(19) $[\![\text{IMP}]\!] := \lambda p[\lambda w[PEP_w(Sp, p)]]$

(20) IMPERATIVE CONVENTION: When a speaker utters an imperative $\phi!$ in a context c, he thereby himself to an effective preference for $[\![\phi]\!]^c$

The existence of an imperative operator

- The behavior of *just* in imperatives provides evidence that there is in fact an imperative operator.
- Without IMP in the denotation of an imperative clause, the ambiguity of imperatives containing *just* cannot be analyzed as a scope ambiguity.
  - We would then have to posit two different lexical items for *just* to account for the two readings, which would be less parsimonious.
- This is evidence in favor of formulating Condoravdi & Lauer's analysis using IMP rather than the Imperative Convention, and it is evidence against analyses like Portner (2004) and Roberts (2018) which argue that the force of an imperative is inferred from its semantic type rather than a speech act operator.

The existence of an imperative operator

- *Just* is not the only expression that demonstrates such a scope ambiguity in imperatives: The additive particles *too*, *also*, and *either* also do.
- *Too*, for example, is usually taken to carry a presupposition that some salient alternative to the prejacent is true (see e.g. Heim 1992, Rullmann 2003, Kripke 2009). In imperatives, this presupposition varies depending on whether *too* or IMP takes widest scope:

(21) a. Mow the lawn. Wash the car, too.
b. Additive presupposition satisfied by *Sp*'s previous commitment to an EP for *Ad* to mow the lawn.
c. $\textsc{too}(\textsc{imp}(\lambda w.[\![Sp \text{ washes the car in } w]\!]))$

(22) a. A: I mowed the lawn. B: Wash the car, too.
b. Additive presupposition satisfied by A having mowed the lawn.
c. $\textsc{imp}(\textsc{too}(\lambda w.[\![Sp \text{ washes the car in } w]\!]))$

Kaufmann: Imperatives as performative modals

- Warstadt (2018) proposes an analysis of Reading 2 similar to the present one but formulated within Kaufmann's (2012) theory of imperatives, which also provides an imperative operator.
- However, I argue that Kaufmann's theory makes at least one false prediction about the behavior of imperatives containing *just*.
- Kaufmann takes imperatives to be performative modals with some special presuppostions.
  - Like performing a directive with *You must...* or *You should...*.
- The ordering source of the modal determines the illocutionary force of the imperative:
  - The ordering source of a command is *what is commanded*.
  - The ordering source of a request is *what is requested*.
  - Etc.

A false prediction

- Kaufmann's theory fails to predict that the question in (23-b) is infelicitous.
  - On her analysis, the imperative in (23-a) can be paraphrased as "In view of what I command, you just have to work until five today."
  - The boss thereby commits to not *commanding* the employee to work past five, but this does not preclude the boss from *requesting* it.
  - So (23-b) should be just as acceptable as (23-a).

(23) Context: The speaker is addressing their full-time employee.

a. You just have to work until five today, but could you work until six?

b. #Just work until five today, but could you work until six?

A solution

(24) Context: The speaker is addressing their full-time employee.

a. You just have to work until five today, but could you work until six?

b. #Just work until five today, but could you work until six?

- If we instead adopt Condoravdi & Lauer's preference-based analysis, the boss incurs a commitment to:
  - An effective preference for the employee to work until five.
  - Withholding commitment to an effective preference for the employee to work past five.
- The question in (24-b) is then contradictory because requesting that the employee work overtime triggers an inference that the boss has an effective preference for the employee to work overtime.

Conclusions

- The behavior of *just* in imperatives provides evidence that a speech act operator is present in the denotation of imperative clauses.
- Of the available theories of the imperative that are compatible with an imperative operator, I argue that Condoravdi & Lauer's (2012) provides better empirical coverage than Kaufmann's (2012).

Future work

- We have seen that *just* and additive particles can scope over IMP, but there are other operators, including *only* and negation, that cannot. What distinguishes these two classes of expressions?

(25) Only take one strawberry.
$\rightsquigarrow$ I request that you take no more than one strawberry.
$\not\rightsquigarrow$ I request no more than that you take one strawberry.

(26) Don't take a strawberry.
$\rightsquigarrow$ I forbid you to take a strawberry.
$\not\rightsquigarrow$ I do not request that you take a strawberry.

- This is one of many differences between *just* and *only* that are not accounted for by current analyses of exclusive particles.

Future work

- Do interrogatives contain a speech act operator? The empirical picture is complex because *just* seems to have its wide-scope effect in questions used to perform indirect requests, but not in information-seeking questions.

(27) Can you **just** give me five minutes?

a. "All I'm asking you is whether you can give me five minutes."

(28) #Can you **just** lift 100 pounds?
(In an interview for a job that involves restocking shelves.)

a. "All I'm asking you is whether you are able to lift 100 pounds."

(29) #What is **just** your name?

a. "All I'm asking you is what your name is."

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