



The long **experimental** road from  
semantic meaning to pragmatic  
Truth-Compatible inferences

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# *Scalar expressions and the grammar/pragmatics divide*

**Semantically**, scalar expressions only carry a lower-bounded meaning:

- *Some, most*: ‘at least some/most (and possibly all)’
- *X or Y*: ‘at least one of X and Y (and possibly both)’.

**Pragmatically**, an upper-bounding scalar implicature is derived: ‘not all’/‘not both’.

➤ **Default reading**: Lower AND upper-bounded:

Quantifiers: ‘**at least** some/most, but **not all**’

*Or*: ‘**at least** one of X and Y, but **not both**’.

# Most

- *Most UCSB students have 0 . . . 1 . . . 2 . . . 3 or 4 drinks per week (4000 don't drink at all).* (An anti-drinking ad at UC Santa Barbara, February 2002)

**Semantically:** 'At least 50+% have 0... 1... 2... 3... or 4 drinks...

**Pragmatically:** 'not all...'

**Reading:** 'At least 50+% but not all UCSB students have 0... 1... 2... 3... or 4 drinks per week.'

# Or

PATTY: ...I don't remember if it was ~Evelyn .. **or** .. ~Deborah. (SBC: 003)

**Semantically:** 'Either Evelyn or Deborah or both'

**Pragmatically:** 'not both Evelyn and Deborah '

**Reading:** 'Either Evelyn or Deborah but not both'.

# *What's wrong<sub>1</sub>?*

## An unintuitive lexicalization pattern

- *Most* and *or* are monomorphemic short lexemes.
- Expectation: they should lexicalize **basic** concepts.
- ‘At least above half’ ‘one of X and Y and possibly both’ = **complex** concepts, which lack upper bounds.
- Expectation: they should be expressed compositionally.
- ✓ No single word for: ‘less than all/half’; ‘up to half/all’ (all lack a lower bound).
- **Hunch<sub>1</sub>**:  
The hypothesized lower-bounded meanings are unlikely lexical meanings.

## What's wrong<sub>2</sub>?

Dissimilarity between *most* and *more than half, or* and *and/or*

If *most* means 'more than half' and *or* means 'and/or' each pair should behave quite similarly wrt upper-bound interpretations.

But they don't:

- *Or* can be read **conjunctively**:

FRANK: It's easier to do naked eye **or** (= 'and') binoculars)). (adapted from SBC: 019)

B: ~ That's not true! Naked eye is not easier than telescope.  
Only binoculars are.

- *And/or* cannot be **conjunctive**:

A: All the sections are kind of self-sufficient, having kitchen units **and/or** bathrooms.

B: ~ ?? That's not true. My section doesn't have a kitchen.

# *What's wrong<sub>2</sub>?*

## Hunch<sub>2</sub>:

- Only *more than half* is a truly lower-bounded quantifier.
- Only *and/or* is a truly lower-bounded (inclusive) connective.
- Linguists were analyzing the wrong expressions.

# *What's wrong<sub>3</sub>?*

## Unintuitive interpretative mechanisms:

- The **frequent** interpretation is upper-bounded, BUT requires a **two-step**, indirect derivation (semantic + pragmatic implicature).
- The **marked/rare** (lower-bounded) interpretation is derived in a **single-step**, direct (semantic-only) mechanism.

## ➤ **Hunch<sub>3</sub>**:

If anything, it should be the other way round:

A single-step mechanism for the unmarked interpretation

A two-step mechanism for the marked interpretation



## *What's wrong<sub>4</sub>?*

The upper-bounding implicature creates an incoherence

- Most profiles the **majority reference set**.
- The implicature gives discourse prominence to the discourse-irrelevant **minority complement set** as well.
- Problem: the majority set supports conclusion 'X'  
the minority set supports conclusion 'not X'  
(albeit more weakly)

## *What's wrong<sub>4</sub>?*

Implicatures are discourse-relevant, and support the speaker's intended message.

Utterance > Implicature

MARY: Did it land in the ditch? > 'Was it a big problem?'

ALICE: But it -- >  
 ... Kind of, 'Yes, but not a big problem necessarily'

It was able to get out > '(Possibly) it got out'

(SBC: 007)

- The implicatures support Mary's and Alice's argumentative directions.

## *What's wrong<sub>4</sub>?*

The Jerusalem municipality will be able to evacuate the tents of **the homeless** ... The court confirmed the evacuation after rental living arrangements were found for **most** of the tent dwellers.

(Originally Hebrew, reconstructed from memory, resh et bet, Feb. 29, 2012)

- Conclusion based only on the profiled majority

Cf.

... The court confirmed the evacuation after rental living arrangements were found for **more than half but not all** of the tent dwellers.

- Different point: **Despite** the fact that a solution was found only for the majority (Conclusion based on both the reference and the complement sets)

## *Building on the scalar implicature is uncooperative*

A: Why do you always think you're right?

B: Because I'm RIGHT **most** of the time

A: **MOST** of the time? Then **you admit** you're wrong **SOME** of the time.

Wrong! Wrong! WRONG!!

B: Things are so different at the office.

(Beetle Bailey, *International Herald Tribune*, 10.17.2003)

## *What's wrong<sub>4</sub>?*

➤ **Hunch:**

The quantifiers' lexical meaning is circumbounded (lower and upper-bounded), and the speaker's argument builds only on this ('majority') meaning.

## What's wrong<sub>5</sub>?

### Different processing costs for a single upper bound?

A. Mary asked John whether he intended to host **all** of his relatives in his tiny apartment. John replied that he intended to host **some<sub>slow</sub>** of his relatives. **The rest<sub>fast</sub>** would stay in a nearby hotel. (Breheny et al 2012)

B. Mary was surprised to see John cleaning his apartment and she asked the reason why. John told her that he intended to host **some<sub>fast</sub>** of his relatives. **The rest<sub>slow</sub>** would stay in a nearby hotel.

- A: The preceding 'all' triggers a 'not all' implicature.
- B: The following 'the rest' retroactively triggers a 'not all' implicature
  - No speaker-intended 'not all' until *the rest* is reached.

# *What's wrong<sub>5</sub>?*

## Hunch:

- A. The complement set is **specifically excluded from the predication** ('not all' is a derived implicature).
- B. The complement is mere ground. It is **neither excluded nor included under the predication**. (The speaker has no communicative intention re the complement).

## *What's wrong<sub>6</sub>?*

Lower-bounded responses do not entail lower-bounded meanings:

- Maya: I promise you that **between 70% and 80%** of the students will pass the tests.

Galit: If this miracle happens, I will get you a 3,000 sheqel bonus.

7 months later it turns out that 90% of Maya's students passed the tests.

- QUESTION: In your opinion, will Maya receive the 3,000 sheqel bonus?

- ✓ 100% of the subjects: “yes”

### Hunch:

Assuming an upper-bounded meaning for scalars does not preclude lower-bounded responses.



# *What were my objections and hunches?*

*(a summary)*

- ✓ The meanings of monomorphemic lexical should stand for **basic concepts** (lower-bounded-only meanings are complex).
- ✓ *Most* and *or*, as used by speakers, should be analyzed (and not in effect *more than half* and *and/or*).
- ✓ The processing procedure associated with the frequent, **unmarked** interpretation -- upper-bounded -- should be simpler (more direct) than the processing procedure associated with the **marked** (lower-bounded) interpretation.

# *What were my objections and hunches?*

*(a summary)*

- ✓ The quantifiers' lexical meaning is **circumbounded** (lower and upper-bounded), **only highlighting the majority set**.
  - The minority complement set is mere ground, just like for 'arc', 'the rest of the circle' is mere ground.
- ✓ There are **two** types of upper-bounds, which function quite differently in discourse: (i) lexical (ii) implicature.
- ✓ A circumbounded meaning doesn't absolutely rule out some lower-bounded responses.
- ✓ *Or*'s lexical meaning is **leaner** than assumed, **procedural** (based on 1053 SBC examples).

# Proposal for the lexical meanings of most & some (Ariel 2004, 2006, 2015)

- Just like typical lexemes, *most* and *some* carry “circumbounded” meanings.
- They each define a lower- and upper-bounded subset:
  - *Some F are G* means ‘there is a **proper** subset of F which are G’:  

$$\llbracket \text{some} \rrbracket (F)(G) = \exists X [X \subset F \wedge \forall x \in X [G(x)]]$$
  - *Most F are G* means ‘there is a **proper** subset of F, larger than half, which are G’:  

$$\llbracket \text{most} \rrbracket (F)(G) = \exists X [X \subset F \wedge |X| > |F|/2 \wedge \forall x \in X [G(x)]]$$

# *Proposal for the lexical meaning of or*

(Ariel & Mauri 2018, 2019)

- Neither lower-bounded nor circumbounded.
- *Or* does not lexically specify the number of alternatives committed to by the speaker.
- **Procedural: ‘Alternativity’** (=competition over a single slot).
- The number of alternatives committed to by the speaker (0, 1 or 2) is a *derived* reading (explicature).
- ‘At least one of X and Y’ (inclusivity) is *not* even an *or* reading.

## *The challenge I faced*

Many experimental findings seem to show:

- *Some* (and *most*) sometimes receive lower-bounded interpretations.
- *Or* sometimes receives inclusive (lower-bounded) interpretations.
- How can I maintain my semantic analyses in light of such solid experimental results?
  - Argue that these lower-bounded interpretations are derived from the circumbounded meaning of the quantifiers for *most* and *some* and from the procedural 'alternativity' of *or*.
- ✓ Argue that lower-bounded experimental **responses** do not attest to lower-bounded **readings**.
- ✓ Distinguish between lower-bounded **responses** (real enough) and lower bounded, speaker-intended **interpretations** (not real).

## *The crux of the problem*

- Linguists imagined the **states of affairs** that scalar quantifiers and *or* are **potentially compatible** with, and then turned around and analyzed these representations as the expressions' **meanings** (a video-camera semantics).
- Koenig's 1991 insight: **A distinction between:**
  - I. The state of affairs projected by the **meaning** of the expression (numerals, *Catholics*) - upper-bounded
  - II. States of affairs potentially **compatible** with the meaning of the expression.
- *Catholics* = 'only Catholics', but compatible with 'Catholics and others'.  
*Nine* = 'exactly 9', but compatible with '10'.
- ✓ Koenig's insight (numerals and "ad hoc scalars")  
-> scalar quantifiers, and *or*.

## *Defining truth-compatible inferences*

**Truth-compatible inferences** = Knowledge-based inferences which bridge the **gap** between:

- i. the speaker-intended representation: e.g., upper-bounded majority
- ii. the relevant state of affairs (e.g., ‘all’)

How?

By mobilizing a (reasonable) assumption (TCI) that ‘A whole is compatible with its proper subsets’.

- ❖ **But**, the **discoursal** compatibility of some meaning (e.g., a circumbounded majority for *most*) with a **subsuming** state of affairs (e.g., ‘all’) is **not guaranteed**.

**Truth-compatible inferences** are merely **potentially** mobilized.

# *The experimental challenge*

Design:

- ✓ One **experimental** task for tapping **all and only** speaker-intended **interpretations**.
- ✓ A different **experimental** task for tapping not only the speaker-intended message, but also potential **truth-compatible states of affairs**.



## *Predictions for expected experimental results*

- Experimental task<sub>1</sub>: Taps interpretation
  - ✓ Prediction: **Consistently** high upper-bounded responses.
- Experimental task<sub>2</sub>: Sensitive to **Truth-Compatible Inferences** (in addition to the interpretation)
  - ✓ Prediction: **Variable** rates of upper- and lower-bounded responses.

# *Task<sub>1</sub>: Participant-Control task*

*(Shetreet and Ariel 2023)*

- **Interpretations** are controlled by addressees.

**A Participant-Control task** lets the participant **control** the correspondence between the target *S* (provided by the experimenter) and the state-of-affairs (provided by the participant).

**Picture matching task:** Participants are presented with an utterance, and they choose the picture (out of 2-3) that matches it.

**Act-out task:** Participants are presented with an utterance, and they themselves “make it true”, e.g., draw it out.

**Sentence correction task:** Participants are presented with an utterance AND a state-of-affairs, but they are encouraged to **correct** the sentence, thus letting them change the original correspondence between the sentence and the state-of-affairs

# *For example, picture matching*

Target S:

*Most of the girls  
wear hats*



## *Task<sub>2</sub>: After-the-fact task*

- The correspondence between the target S and the state-of-affairs is controlled by the **experimenter**.
- The participant cannot change either the target S or the state-of-affairs after the fact.
- She can only “**take it** (judge as True) **or leave it** (judge as False).
  - Mobilized **Truth-Compatible inferences** -> True judgment, but TCIs are optional and mobilized at the participant’s discretion. Failure to mobilize the relevant TCI -> F.

*For example, did the speaker guess right?*

*Target S:*

*Most of the girls wear hats*



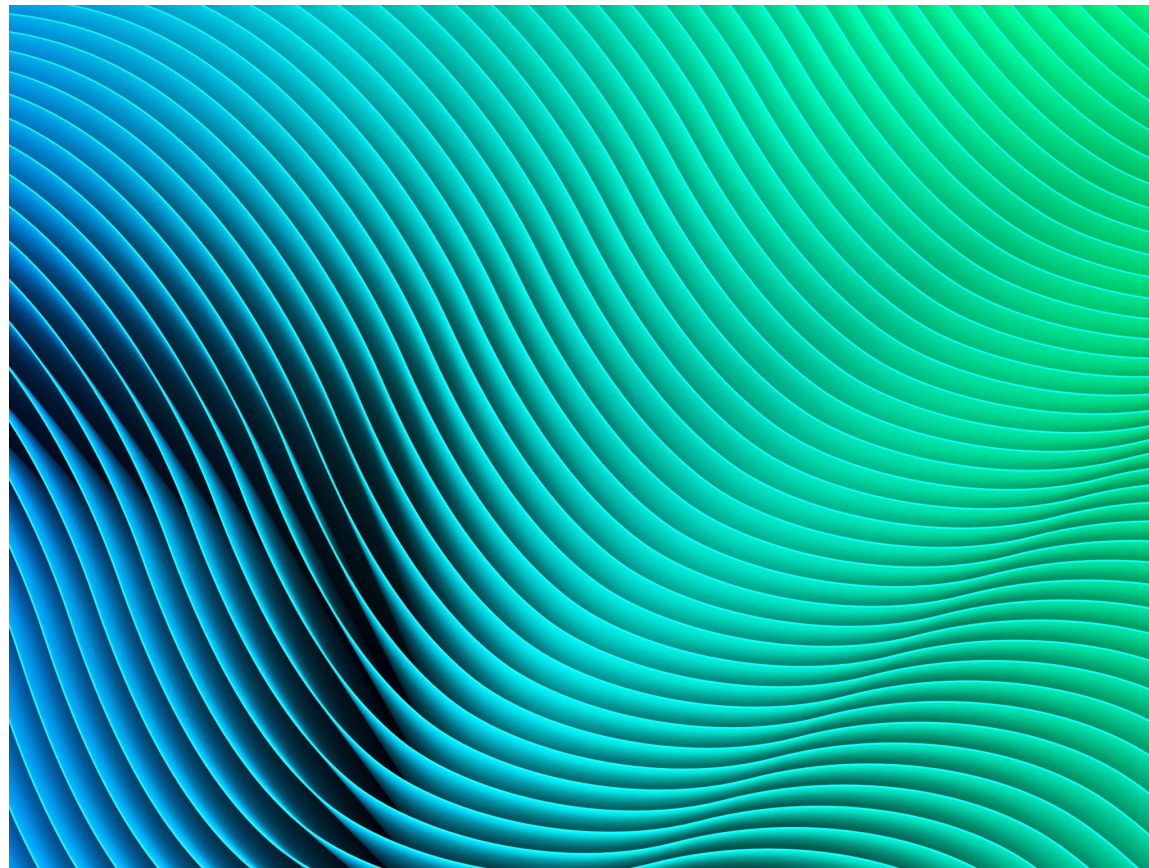
State-of-affairs

Right or not?

Hebrew 'most' (*rov*)

*Caution: Interpretation must include dispreferred denotations as well!*

*“Show me **all** the blues”*



- We should rule out the possibility that ‘all’ is simply dispreferred

## Most: A *participant-control task*

(Ariel 2004, 2006)

- A **questionnaire** presented (Hebrew) participants with a variety of sentences containing *most*.
- Participants were asked to circle **all** the values that the speaker **could possibly intend** when she used *most* in the case at hand, even if the answers seemed quite unlikely to them:

“... It’s possible that **several** of the answers are appropriate. In such a case you should choose **all** the answers that the speaker might have considered possible, **even if chances for it are slim in your opinion** (original emphases)”.
- The instruction to maximize the number of responses was repeatedly mentioned during the experiment, to make sure participants do not make do with the preferred interpretation only (a problem with picture matching tasks).



## *Example questions*

*Most/more than half of high school students drink alcohol.*

Which of the following cases could the speaker mean?

- A. 80% of high school students
- B. 50% of high school students
- C. 100% of high school students
- D. 28% of high school students
- E. None of the above.

*An overwhelming majority of the students passed the test (A lot more than half..).*

What percentage of students may have passed the test according to the speaker's sentence?

- A. 97%
- B. 98%
- C. 99%
- D. 100%

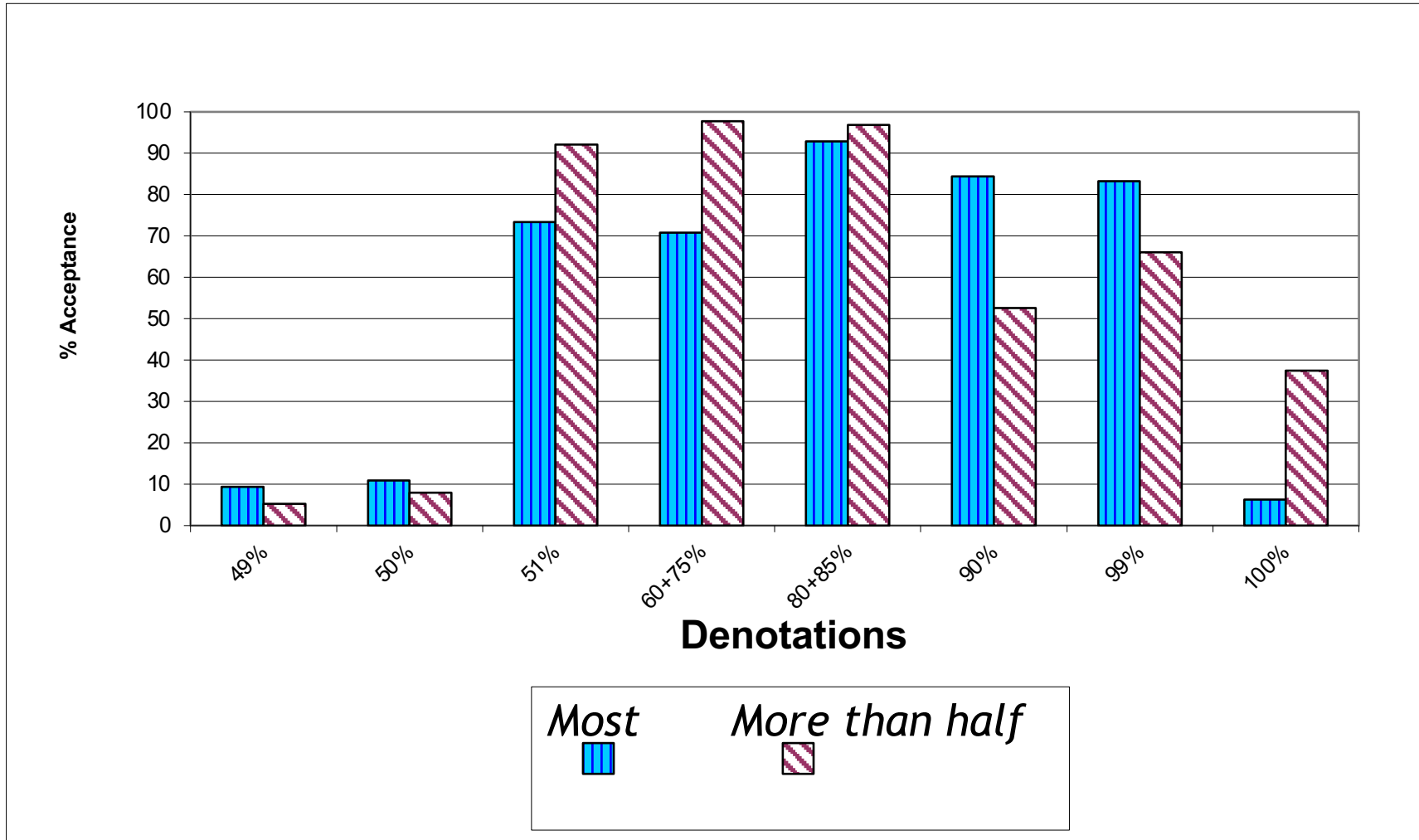
## *Example questions*

*Most/more than half of the students in the class were born in 1970.*

How many students could the speaker mean?

- A. 100% of the students
- B. 20% of the students
- C. 50% of the students
- D. 49% of the students
- E. None of the above.

# Interpretation of Most & more than half



## *After-the-fact task*

Participants can decide whether or not to mobilize Truth-compatible inferences in order to bridge the gap between the upper-bounded speaker-intended interpretation and the relevant state-of-affairs:

The catering company manager announced that if anyone would guess how many of the guests would prefer square plates, they would win a dinner set.

Dana guessed that **most** of the guests would prefer square plates, Oren guessed that none of the guests would prefer square plates, and Iddo guessed that **80%** of the guests would prefer square plates.

**Question:** At the end of the event, it was found out that **all** the guests preferred square plates. Who is entitled to the promised prize?

- A. Dana (*most*)
- B. Oren (*none*)
- C. Iddo (80%)
- D. Nobody

## *After-the-fact task*

*I'll bet you that the Dolphins will win **most** of their games this year.*

- Horn's 2006:18 intuition: "It is clear that once the Dolphins won all their games . . . I won the bet"
- My results: Only 33% gave Dana (*most*) the prize i.e., 'all' is compatible with *most*. The majority (62.5%): 'all' is **not** compatible with *most*.
  - TCI's *can* be mobilized, but don't have to.
- Different After-the-fact questions (different contexts) triggered extremely variable "lower-bounding" (=compatibility) responses:
  - 4 truth-compatibility questions: acceptance varied between 5.9% and 83.3% This variability points to the pragmatic nature of the part-whole inference.

## *Participant-Control Versus After-the-fact*

*The teacher already knows most of the students*

- Participant-control: A marginal 8.7% lower-bounded interpretation choices ('51-100%').
- After-the fact (The fact is that the teacher knows all the students): A majority 73.3% True judgments (a lower-bounded response).

## *Interim conclusion: Most*

- ✓ The Participant-Control task consistently elicits upper-bounded responses at ceiling rates.
- ✓ The After-the-fact task elicits a variable rate of lower-bounded responses.

Hebrew *xelek* ‘part’  
and English *some*



# Hebrew xelek

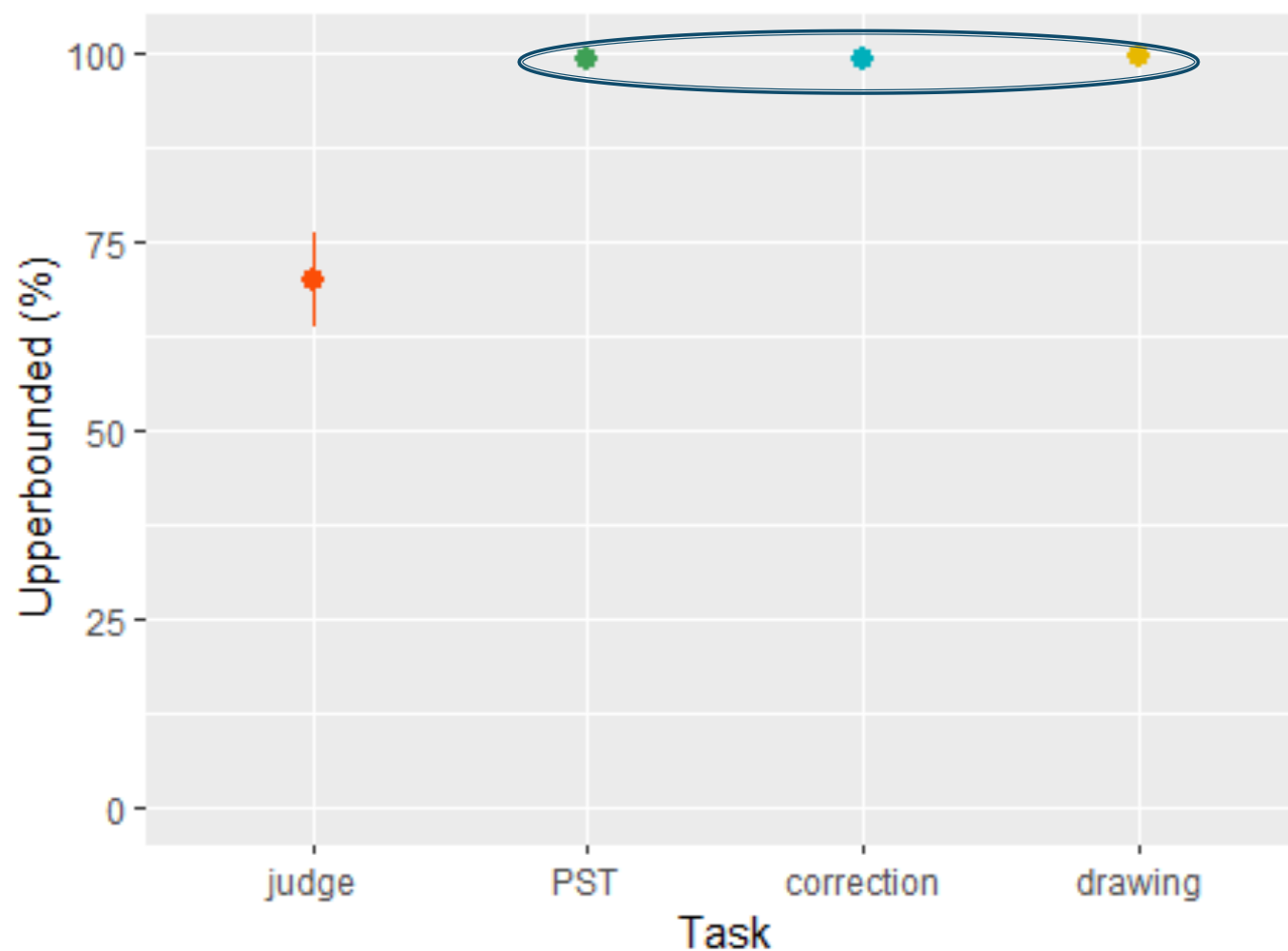
(Shetreet & Ariel 2023)

- Three different Participant-Control tasks
- One After-the-fact task (Truth judgment)

## Results:

- ✓ Participant-Control tasks: At ceiling for upper-bounded responses.
- ✓ After-the-fact task: A smaller majority of upper-bounded responses. Only here is there a minority of lower-bounded responses.

## *Truth judgement vs. 3 Participant-Control tasks: Hebrew Xelek 'part'*



## *Interim conclusion: Hebrew Xelek*

- ✓ The Participant-Control task elicits upper-bounded responses at ceiling .
- ✓ The After-the-fact task elicits a variable rate of lower-bounded responses.

## Some: *Give lower-bound a chance!*

Task: Choose the more coherent response B in the following dialogues:

(The Context favors a lower-bound only interpretation):

A: We're looking for a good mediator.

B<sub>1</sub>: Stevens managed to resolve **some** of the issues in our extremely difficult case, **so** we all think very highly of her.

➤ 'Resolved some (and possibly all) of the issues' **supports** 'think highly of Stevens'.

*Cf.*

B<sub>2</sub>: Stevens managed to resolve **some, not all** of the issues in our extremely difficult case, **so** we all think very highly of her.

➤ 'Resolved some, **not all** of the issues' does **not necessarily support** 'think highly of Stevens'.

✓ B<sub>1</sub> (*some*) was preferred over B<sub>2</sub>, in order to **avoid** 'not all'.

## *A coherence questionnaire*

How is *some* **interpreted** in this lower-bound-only context?

(A Participant-Control task)

A: Stevens managed to resolve **some** of the issues in our extremely difficult mediation case, so we all think very highly of her  
(= the above preferred  $B_1$ ).

▪ The alternative B responses **explicate** *some* here:

B1: Congratulations to her for having resolved **some**, and **maybe** all the issues.

B2: Congratulations to her for having resolved **some**, **even if not all** the issues.

✓ The reference set is upper-bounded, even though no scalar implicature is conversationally plausible.

## *Interim conclusion: Some*

- Although an ‘**all exclusion**’ inference was not derived, an **upper bound** on the reference set IS in place.
- The source of this upper bound must be lexical.
- Hence, scalar upper bounds come in two types:
  - **Upper-bound reference**: An upper-bounded reference set is profiled; the complement set does not fall under the speaker’s communicative intention (“Stevens resolved **some** of the issues”).
  - ‘**All exclusion**’: Both the upper-bounded reference set and the complement set are profiled (albeit to different degrees). The complement is **excluded** from the predication.

(A: Did Stevens resolve **all** the issues?

B: She solved **some** of them).

Hebrew 'or' (o)

## *Participant-control versus After-the-fact*

*(Katzir, Arnon & Ariel 2023)*

### Participant-control task:

Participants heard descriptions of presents given to a birthday boy (Guri).

Question: How many presents did X give Guri?

(Answer **depends on the interpretation** given to the target S)

For example:

#### Target S

A gave Guri a book and a truck.

B gave Guri a book.

C gave Guri all sorts of books.

D gave Guri a book or a truck.

#### Expected response

2

1

Can't tell

1/2/Can't tell (**if inclusive**)

1 ('exclusive', by default)

1 (**if 'narrowed'** - Ariel & Mauri 2018, 2019)



# Results

Target S	Expected	Actual
<i>A gave Guri a book and a truck.</i>	2	2=99.39%
<i>B gave Guri a book.</i>	1	1=98.79%
<i>C gave Guri all sorts of books.</i>	Can't tell	Can't tell=98.18%
<i>D gave Guri a book or a truck.</i>	1/2/Can't tell	1=94.24%
		2=0.91%
		Can't tell=4.85%

'Or' here is **not** inclusive.

# *Participant-control versus After-the-fact*

*(Katzir, Arnon & Ariel 2023)*

## After-the-fact: Guessing

Guri's mother decided to try and guess which presents were given to Guri by each guest.

Target Ss (guesses)

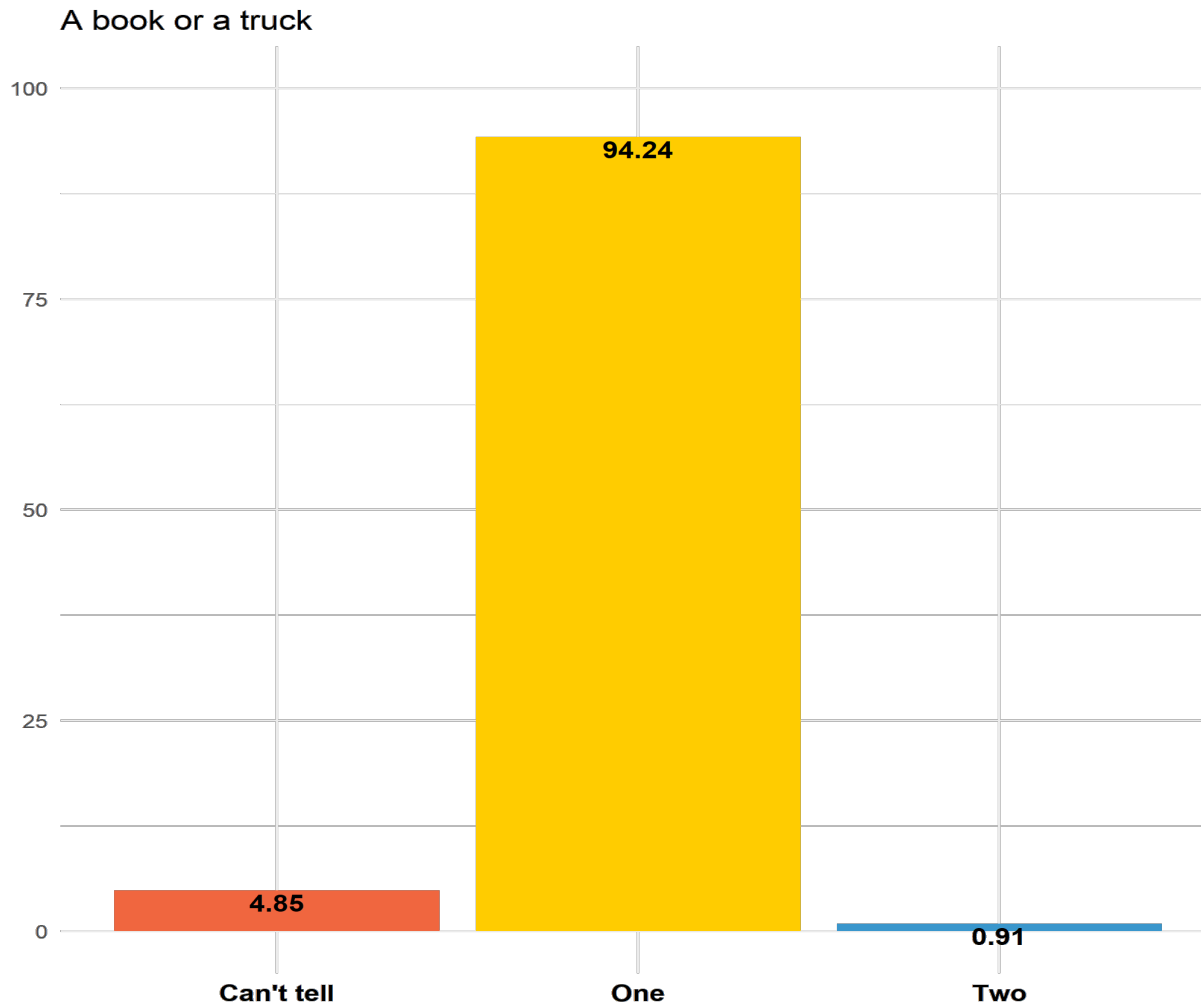
*A gave Guri a book **and** a truck.*

*B gave Guri a book.*

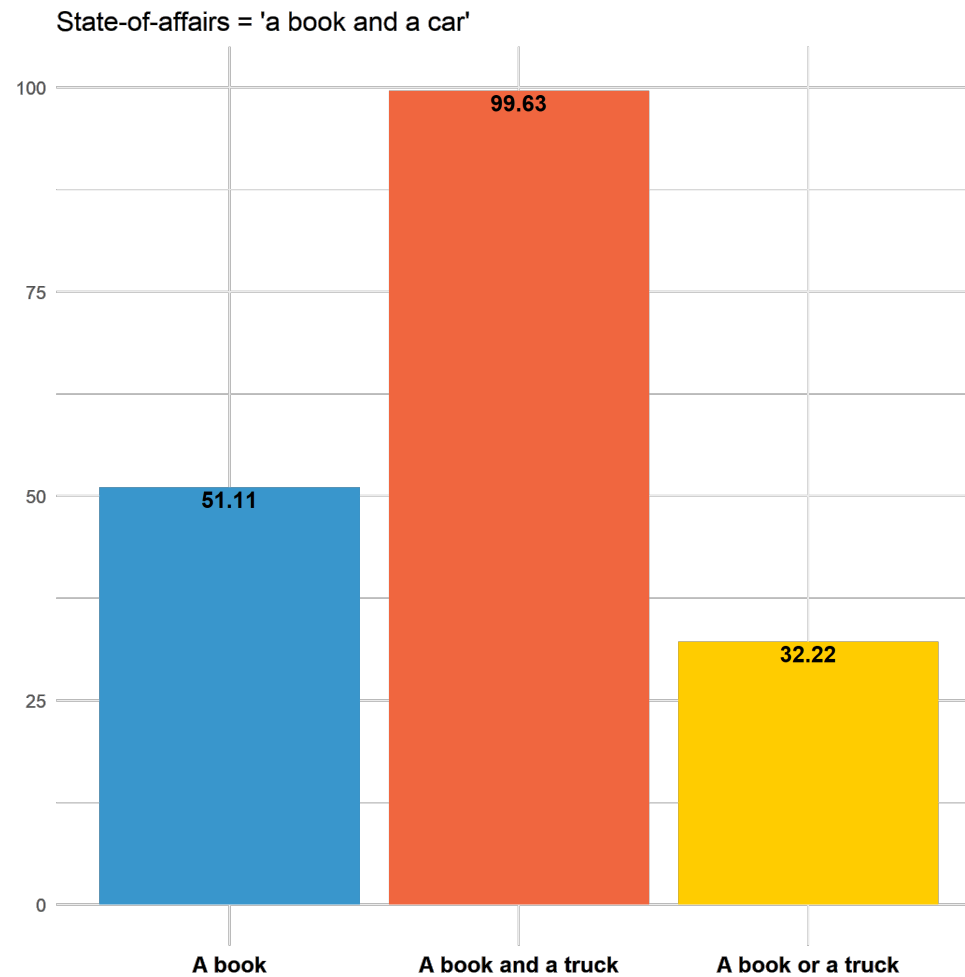
*C gave Guri a book **or** a truck.*

Critical **state of affairs**: Guest gave Guri a book and a truck.

## *Results: Participant-control (How many)?*



# Results: After-the-fact “Right” against ‘a book & a truck’



# *Conclusion*

- ✓ Participant-control -> consistently upper-bounded
- ✓ After-the fact -> variable upper and lower-bounded

# Or: Give 'inclusivity' a chance!

*Fishman et al 2023*

- *(Background story)*

The fashionable Maxie club in Tel Aviv has recently seen numerous drunken brawls, which have scared off many customers, especially female customers. Management has announced a promotion for two months: women will enter the club for free, and **every man** that arrives with at least one woman will receive a 40% discount on the entrance fee.

Oren lives with three female flatmates, Dafna, Tali and Daria, and they are regular customers at Maxie. Oren is planning to go there this Tuesday.

- *(Dialogue)*

The following conversation takes place on Wednesday, between Tamar and Guy, friends of Oren.

Guy: I forgot to tell Oren about the new promotion at Maxie. I wonder if he got a discount on his entrance fee yesterday.

Tamar: Don't worry. **He arrived with Dafna or Tali.** *(critical)*

- *Multiple choice questions*

1. What has to happen for Oren to get a discount on his entrance fee to Maxie?
  - a. Oren has to arrive with at least one woman.
  - b. Oren has to arrive with at least two women.
  - c. It's impossible to know for sure.
2. Checking attention
3. If you ask Tamar if Oren got a discount on his entrance fee to Maxie, what would she reply?
  - a. "Yes."
  - b. "No."
  - c. "It's impossible to know for sure."
4. Where in Tel Aviv is Maxie?
  - a. In Florentin.
  - b. In Rabin Square.
  - c. It's impossible to know for sure.

## *After-the-fact versus Participant-control*

### After-the-fact:

5.1 It turns out that Oren arrived at Maxie with Tali and with Dafna. Is what Tamar said true?

- a. Yes.
- b. No.
- c. It's impossible to know for sure.

Or:

### Participant-control:

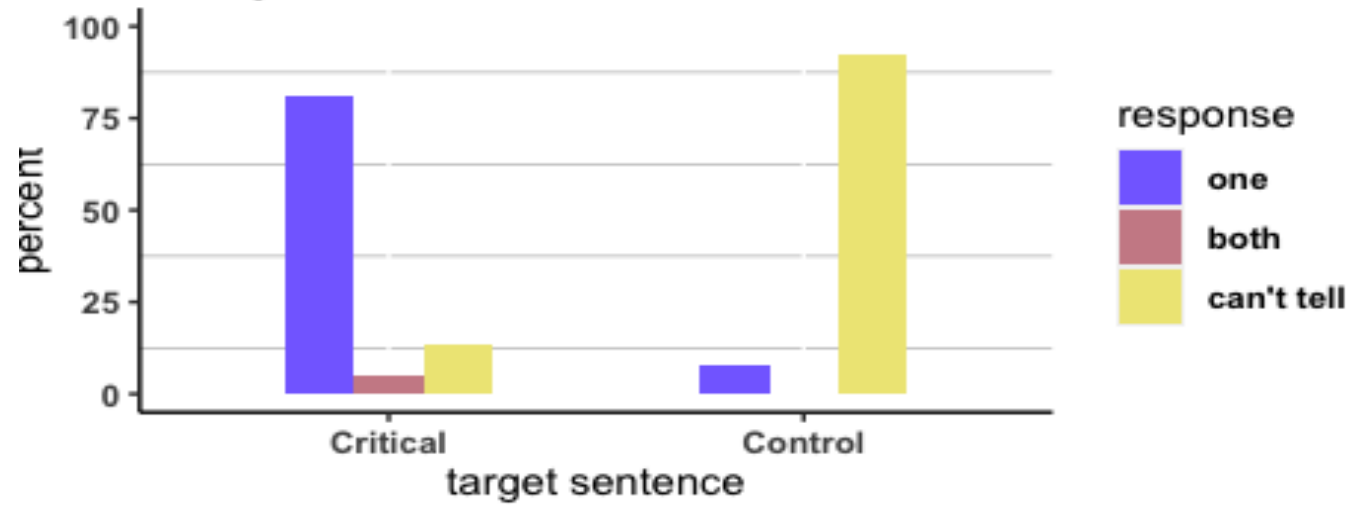
5.2 You want to know how many flatmates came to Maxie with Oren.

You meet Guy and ask him. Guy replies:

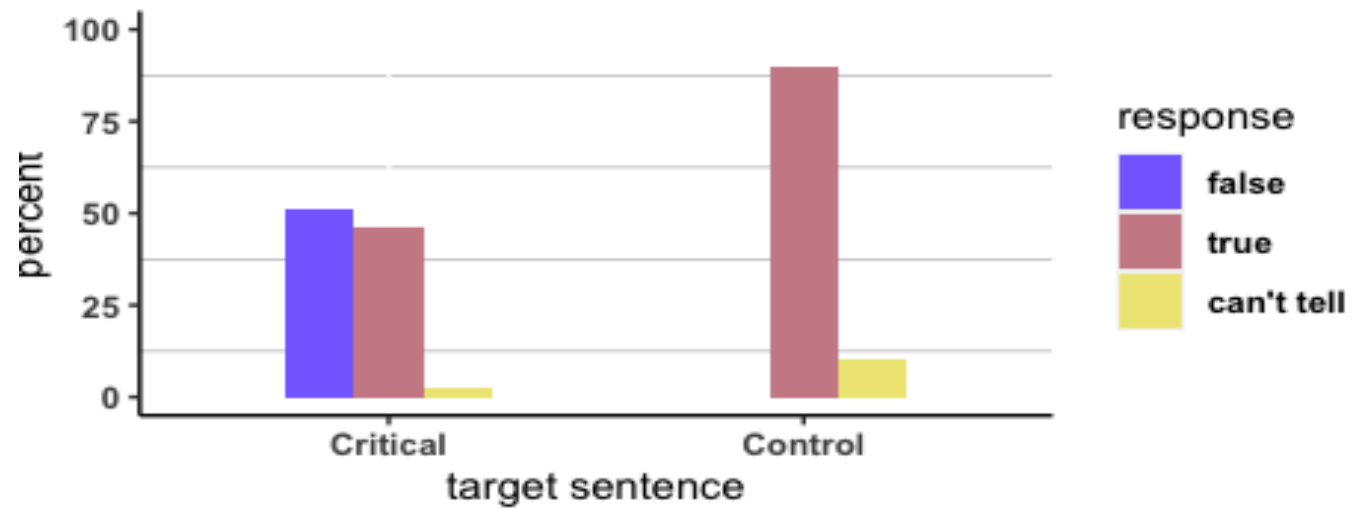
- a. According to what Tamar said, one flatmate.
- b. According to what Tamar said, two flatmates.
- c. According to what Tamar said, it's impossible to know for sure.



### A Interpretation task



### B Verification task



## *Conclusions: Or*

- ✓ *Or* is **not interpreted inclusively**, even when inclusivity is given a very good chance (the Participant-Control task).
- ✓ The same participants provided both upper- and lower-bounded responses to *or* - the **difference is due to the task** (The comparison between the Participant-Control and the After-the fact questions).

## *Conclusions: scalar quantifiers*

- ✓ A speaker predicating over proper subsets treats these proper subsets as **independent discourse entities**, despite the fact that objectively speaking they are necessarily part of larger wholes.
- ✓ There are two “upper-bounds”
  - A **lexical** upper-bound -- plays no discourse role.
  - An **implicated** upper-bound (in addition) -- discourse relevant.

## *General conclusions: Or*

- ✓ *Or*'s lexical meaning is merely a procedural 'alternativity' relation (not here argued for).
- ✓ A lower-bound interpretation for *or* is not attested.

## *From semantic meaning to Truth-Compatible inferences: General implications*

Different experimental tasks trigger **different processing**:

- ✓ Participant-Control tasks elicit speaker-intended **interpretations**.
- ✓ After-the fact tasks allow the consideration of **Truth-compatible inferences** *on top of* the interpretation.
- ✓ Experimentalists should be cautious about using **After-the-fact** tasks to probe **speaker-intended meanings**.
- ✓ Theoreticians should make sure that what they propose as **semantic meaning** (e.g., ‘possibly all/both’) or as **pragmatic implicature** (e.g., ‘not all/both’) is not in fact merely a **Truth-Compatible inference**.

**THANKS!**

My collaborators:

Daniel Asherov, Alon Fishman,  
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Jack DuBois, Caterina Mauri

**You all!**

# References

## References

- Ariel, Mira. 2004. *Most*. *Language* 80:658–706.
2006. A ‘just that’ lexical meaning for *most*. In Klaus von Stechow and Ken Turner, eds., *Where semantics meets pragmatics* (Current Research in the Semantics/Pragmatics Interface). London: Elsevier, 49-91.
2008. *Pragmatics and grammar*. Cambridge: Cambridge University Press.
2010. *Defining pragmatics*. Cambridge: Cambridge University Press.
2013. Centering, Accessibility and the next mention. *Theoretical Linguistics* 39-58.
2014. What discourse can(not) teach us. *International Review of Pragmatics* 6:181-210.
2015. Doubling up: Two upper bounds for scalars. *Linguistics* 53:561-610.
2016. Revisiting the typology of pragmatic interpretations. *Intercultural Pragmatics* 13:1-36.
2019. Different prominences for different inferences. *Journal of pragmatics* 154:103-116.

- Ariel, Mira and Caterina Mauri. 2018. Why use *or*? *Linguistics* 56:939-994.
2019. An 'alternative' core for *or*. *Journal of pragmatics* 149:40-59.
- Breheny, Richard, H.J Ferguson and Napoleon Katsos. 2012. Investigating the timecourse of accessing conversational implicatures during incremental sentence interpretation *Language and cognitive processes*.
- Fishman, Alon, Daniel Asherov, Nicole Katzir and Mira Ariel. 2023. Discourse context cannot make 'or' inclusive (only experimental task can). *Journal of pragmatics* 217:7-16.
- Horn, Laurence R. 2006. The Border Wars: a neo-Gricean perspective. In Ken Turner and Klaus von Stechow, eds., *Where semantics meets pragmatics*. London: Elsevier, 21-48.
- Katzir, Nicole, Inbal Arnon and Mira Ariel. in prep. *Or*: Interpretation versus Truth Compatibility. Tel Aviv University and the Hebrew University in Jerusalem.
- Koenig, Jean-Pierre. 1991. Scalar predicates and negation: Punctual semantics and interval interpretations. In *Chicago Linguistic Society 27*. Chicago: Chicago Linguistics Society, 140-155.
- Shetreet, Einat and Mira Ariel. 2023. Taking control over weak scalar expressions. Tel Aviv University.