Implicature is a discourse phenomenon

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Thank you:

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The main goal of this talk is therapeutic

- ☐ Even if DRT awoke Rob from his Fregean slumber, one suspects that he is still a bit drowsy.
- ☐ Rob has absorbed the mentalistic DRT philosophy in much the same way as oil absorbs water.
- ☐ There is some evidence suggesting that Rob continues to believe in *propositions*.

but: It is never too late for mental healing.

"Local implicatures"

Sometimes, implicatures *seem* to arise within the scope of an operator:

[1] Wilma believes that the PM was in Iran or Iraq.
   ↝ She believes he wasn't in both countries.

[2] This year, two ministers will visit several African countries.
   ↝ They will not visit all of them.

Questions about local implicatures:

☐ What are the facts?

☐ How are we to explain them?

Two schools of thought

☐ Defaultism/localism   (Levinson, Landman, Chierchia, Blutner)
- ○ Implicatures are triggered blindly, but fortunately they are cancellable.
- ○ Implicatures are local: they are associated with words.

☐ Contextualism/globalism   (Sauerland, Spector, van Rooij & Schulz)
- ○ Implicatures only arise when required by the context.
- ○ Cancellation may occur, but it is less central to the theory.
- ○ Implicatures aren't local: they are inferred on the basis of utterances.

Real data

Local implicatures anywhere?

Experiment #1

premiss	conclusion
Fred drank coke *or* beer	He didn't drink both
Fred danced with *some* girls	He didn't dance with all the girls
All guests drank coke *or* beer	No guest drank both
Every boy danced with *some* girls	No boy danced with all the girls
Betty thinks that Fred drank coke *or* beer	She rules out the possibility that he drank both
Betty thinks that Fred danced with *some* girls	She rules out the possiblity that he danced with all the girls
It's certain that Fred drank coke *or* beer	It's out of the question that he drank both
It's certain that Fred danced with *some* girls	It's out of the question that he danced with all the girls

Results   Experiment #1
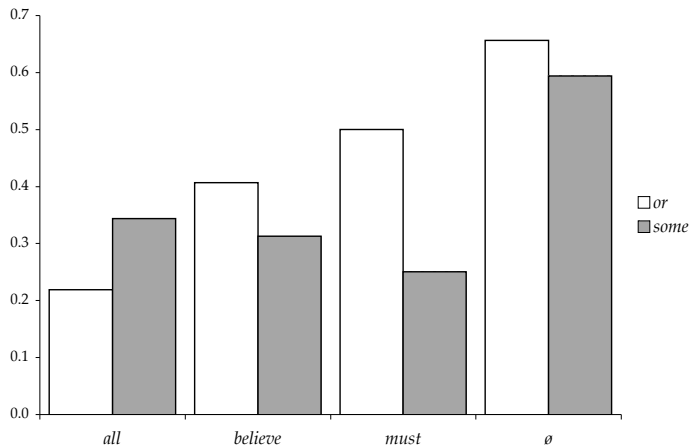
Comparing embeddings

Experiment #2

☐ Modals:

telic: Fred *has to* read Harry Potter 2 or 3.
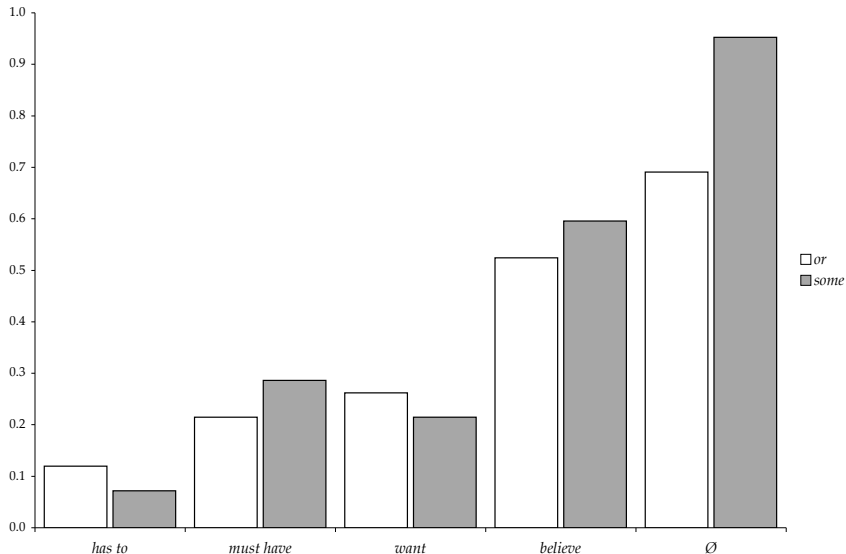*epistemic:* Fred *must have* read Harry Potter 2 or 3.

☐ Attitude verbs:

telic: Betty *wants* Fred *to* read Harry Potter 2 or 3.
epistemic: Betty *believes that* Fred read Harry Potter 2 or 3.

☐ For a defaultist account, there shouldn't be a difference between these two types of statement.

☐ On a contextualist view, there might be.

Results   Experiment #2

Implicatures are topic-dependent   Experiment #3

Q^- : Why is Fred so pale?

Q^+ : What did Fred drink?

A : He had beer or wine. $\overset{?}{\leadsto}$ not both

Q^- : Has Betty ever been abroad?

Q^+ : Which parts of northern Europe has Betty been to?

A : She has visited several Scandinavian countries. $\overset{?}{\leadsto}$ not all
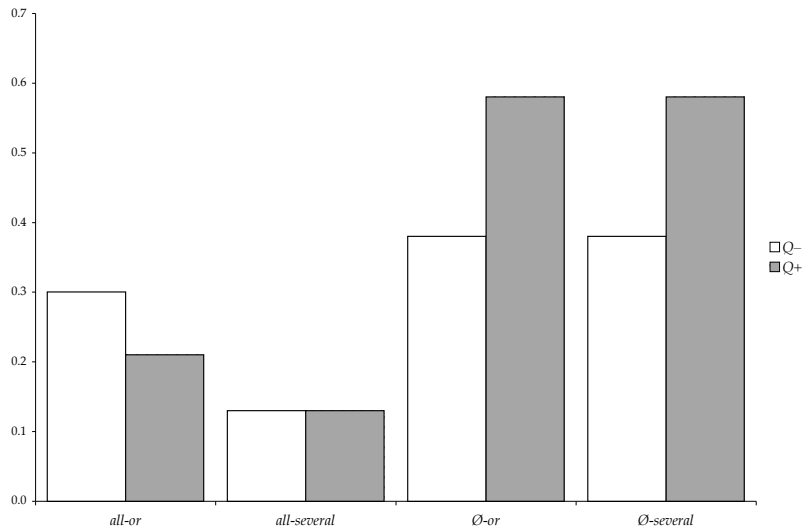
Q^- : I'm going to the supermarket, and would like to know if I should buy orange juice. What did people drink last night?

Q^+ : What did each of our guests drink last night?

A : All guests had beer or wine. $\overset{?}{\leadsto}$ none both

Results

Experiment #3

Taking stock

- ☐ The rates at which scalar inferences occur decrease under embedding.
- ☐ The difference is often dramatic, sometimes less so.
- ☐ Hence, empirical evidence argues against a uniform mechanism for deriving scalar implicatures.
- ☐ Context plays a role in at least two ways:
  - ○ discourse goals (topics)
  - ○ embedding operators
- ☐ The only way of saving defaultism/localism is by neutralising its defining features.
- ☐ Contextualism/globalism is the way to go.
- ☐ Sadly, however, it has its share of problems, too.

The classical account of implicature

Scalar implicatures: the standard neo-Gricean model

Let ϕ be an utterance and ψ a stronger alternative:

☐ Primary implicature: $\neg K\psi$: speaker doesn't know that ψ.

☐ Secondary implicature: $K\neg\psi$: speaker knows that not-ψ.

☐ The secondary implicature requires a further assumption, e.g. that the speaker is "competent":

If ψ, then the speaker knows that ψ.

☐ In this type of account:
  ○ Implicatures depend on the context in at least two ways:
    ▷ Alternatives are context dependent.
    ▷ The competence assumption holds in some contexts only.
  ○ Implicatures are derived from *utterances*, and in this sense the proposed explanation is globalist.

Examples

- ☐ "Some professors are smart."
    - ○ Primary implicature: ¬K[all professors are smart]
    - ○ Secondary implicature: K¬[all professors are smart]
- ☐ "You may take an apple."
    - ○ Primary implicature: ¬K[you must take an apple]
    - ○ Secondary implicature: K¬[you must take an apple]
- ☐ "Sue had more than two beers."
    - ○ Primary implicature: ¬K[Sue had more than n beers], $n > 2$
    - ○ Secondary implicature: *none* (Competence doesn't hold.)

Explaining local implicatures

☐ What is there to explain? We only have *some* evidence for strong implicatures in the scope of:
- *believe* (but not *want*)
- epistemic *must* (but not deontic *must*)

☐ The neo-Gricean account *explains* why so few implicatures arise under embedding.

☐ We surely don't want a general mechanism that uniformly generates strong implicatures in all embedded positions.

☐ Maybe *ad hoc* explanations are our best bet?

Ad hoc like so:

☐ On its epistemic interpretation, "must ϕ" is roughly equivalent to ϕ, so "must ϕ" and ϕ will tend to share implicatures.

☐ "a said ϕ" will tend to share implicatures with ϕ, for obvious reasons.

☐ In many cases, "a believes ϕ" suggests that a said ϕ, so "a believes ϕ" will tend to share implicatures with ϕ.

Global vs. local

- The standard picture:
  - Defaultism/localism assumes that implicatures are triggered sub-sententially.
  - The globalist alternative is to suppose that implicatures are derived on the basis of sentence-sized units (propositions).
- There is a third option: viewing implicature as a discourse phenomenon.
- When interpreting discourse, hearers reason in terms of discourse referents, discourse segments (paragraphs), etc.
- There is no reason to suppose that implicatures are an exception to this.
- Two kinds of evidence for this position: sub-propositional and supra-propositional implicatures.

Sub-propositional implicatures

A problem for proposition-based accounts

☐ "A student of mine has read several of Chomsky's papers."
  ○ Primary implicature:
    ¬K[a student of mine has read all of C's papers]
  ○ Secondary implicature:
    K¬[a student of mine has read all of C's papers]

☐ This doesn't feel right.

☐ Defaultism/localism scores a point here:
  ○ A student of mine has read several but not all of C's papers.

Rob to the rescue!   van der Sandt (1992)

[1] I saw Jones with a lady$_i$ last night.

$\not\leadsto$ I saw Jones with a woman who wasn't his wife.

$\leadsto$ She$_i$ wasn't his wife.

[2] There is a gas station$_i$ around the corner.

$\not\leadsto$ There is a gas station around the corner and it is open.

$\leadsto$ It$_i$ is open.

☐ "It turns out that all pragmatic information may entertain anaphoric links to the content expression it is associated with." (van der Sandt 1992: 372)

☐ Sounds plausible, but what does it *mean*?

Deriving implicatures in context

Singular indefinites

☐ "A student of mine has read several of Chomsky's papers."

☐ DRS with alternatives:

x
student(x)
$\boxed{a}$ x read several of C's papers
$\boxed{b}$ x read all of C's papers

☐ Final DRS:

x
student(x)
x read several of C's papers
¬ x read all of C's papers

Deriving implicatures in context

Plural indefinites

- ☐ "Sm students of mine have read several of Chomsky's papers."

- ☐ DRS with alternatives:

X
student(X)
[a] (x ∈ X)[x read several of C's papers]
[b] (x ∈ X)[x read all of C's papers]

- ☐ Final DRS:

X
student(X)
(x ∈ X)[x read several of C's papers]
¬(x ∈ X)[x read all of C's papers]

Deriving implicatures in context

Free choice permission

- □ "You may take an apple or a pear."
- □ DRS with alternatives:

p
... p ...
p :: [apple ∨ pear]
a p :: [apple]
b p :: [pear]

- □ Final DRS:

p
... p ...
p :: [apple ∨ pear]
p ∦ [apple]
p ∦ [pear]

Supra-propositional implicatures

Riddle!

- ☐ All the sheep are in the basement.
- ☐ Most of the alligators are in the living room, but some of them are in the kitchen.
- ☐ There are kangaroos in the kitchen, too.
- ☐ Wilbur is in the kitchen and he is not a kangaroo.

Question:

What kind of animal is Wilbur?

Wrong! He's a goldfish!

Exhaustivity implicatures

☐ Exhaustivity implicatures are based on the assumption
that all relevant information is in, so what has not been
said is not the case.

☐ Exhaustivity implicatures are closely related to scalar
implicatures (Spector, van Rooij and Schulz).

☐ The "relevant information" may be contained in a single
utterance, but also in a sequence of utterances.

☐ Hence, this type of implicature is not proposition-based,
either.

Examples

[1] Q: Who of your friends has read *Lolita*? A: Barney.
⤳ No other friend of A's has read *Lolita*.

[2] If you mow the lawn, I'll give you five euros.
⤳ I will only give you five euros if you mow the lawn.

[3] If there is smoke in the basement, the red light goes on;
if there is smoke in the library, the yellow light goes on;
if there is smoke in the kitchen, the red light goes on.

⤳ If the red light goes on, there is smoke in the basement or
the kitchen.

☞ [2] and [3] are instances of the same pattern.

Conclusion

Guess what?

Implicature is a discourse phenomenon.