

Exhaustivity without the competence assumption

Matthijs Westera

Institute for Logic, Language and Computation
University of Amsterdam

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Wrong, it does!

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What about a context negating only the competence *assumption*?

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Part II: Intonation and exhaustivity

- ▶ How to enforce exhaustivity.
- ▶ ...and how to prevent it.

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2. Diagnosis
3. Theory
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maxim of Relation

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3.1. Translation into logic

3.2. Semantics

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- (6) a. Of John, Bill and Mary, who came to the party?
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- (6) a. John came, or Mary, or John and Mary. $p \vee q \vee (p \wedge q)$
b. John came. p
c. John came, or Mary and John. $p \vee (p \wedge q)$

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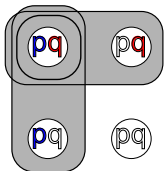
(6a) $[p \vee q \vee (p \wedge q)]$

(6b) $[p]$

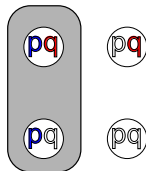
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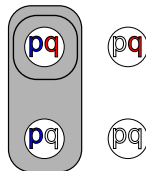
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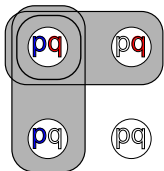
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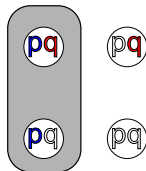
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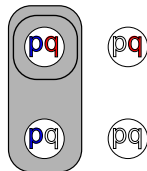
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Entailment

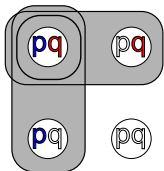
A entails B , $A \models B$, iff

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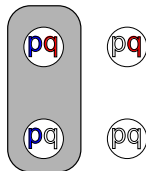
(ii) for all $b \in B$, if $b \cap \cup A \neq \emptyset$, $b \cap \cup A \in A$

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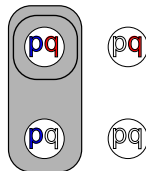
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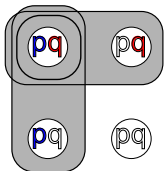
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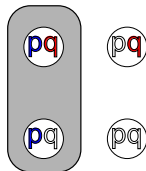
→ at least as informative

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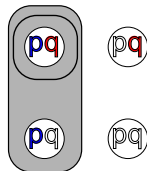
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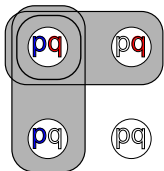
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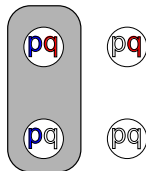
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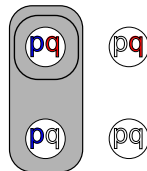
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(i) $\cup A \subseteq \cup B$; and

(ii) for all $b \in B$, if $b \cap \cup A \neq \emptyset$, $b \cap \cup A \in A$

→ at least as informative

→ at least as attentive

Now, (6c) \models (6a), but (6b) $\not\models$ (6a).

3.3. Pragmatics

The relevant maxims

1. **Quality:**
2. **Quantity:**
3. **Relation:**

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For a cooperative speaker with information s , responding R to Q :

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3.3. Pragmatics

The relevant maxims

For a cooperative speaker with information s , responding R to Q :

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2. **Quantity:** For all $Q' \subseteq Q$, if $s \subseteq \cup Q'$ then $\cup R \subseteq \cup Q'$.
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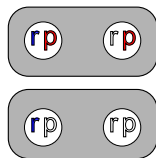
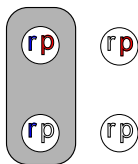
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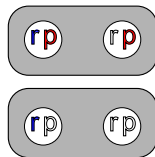
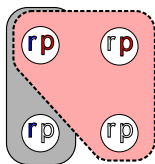
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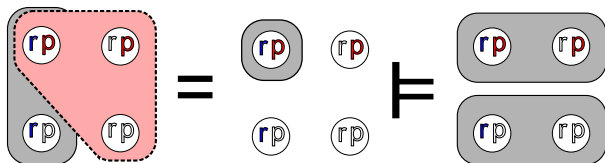
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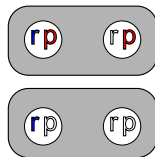
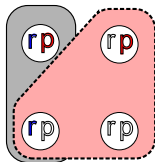
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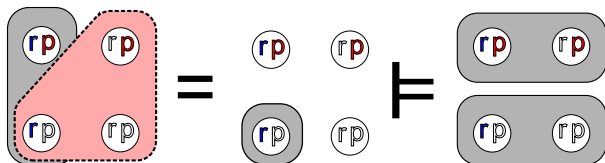
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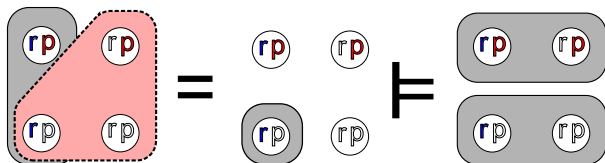
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(7) Did John go to the party?

It was raining. \rightsquigarrow If it rained, John {went / didn't go}.



3.3. Pragmatics

(cf. Grice '75; Groenendijk & Stokhof '84; Roberts '96; v.Rooij & Schulz '04)

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4. Results

- 4.1. Examples
- 4.2. What's happening
- 4.3. 'Alternatives'?
- 4.4. Main conclusion

4.1. Examples

(6) a. John came, Mary came, or both came ($p \vee q \vee (p \wedge q)$)

b. John came. (p)

c. John came, or Mary and John. ($p \vee (p \wedge q)$)

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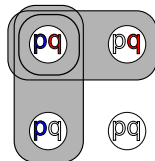
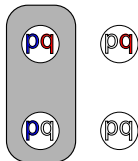
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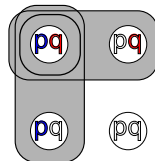
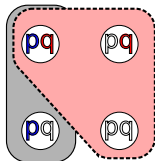
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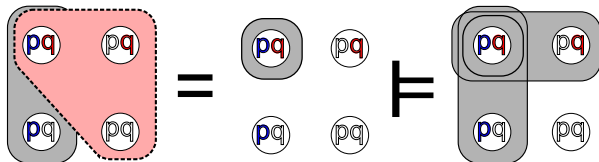
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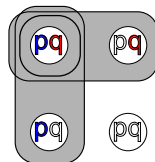
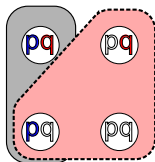
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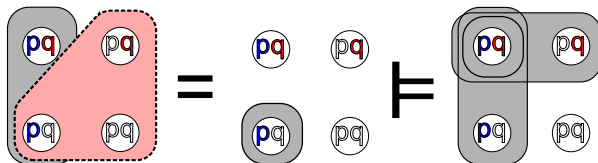
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4. $s \subseteq |\overline{q}|$ exhaustivity!

$$p \neq p \vee q \vee (p \wedge q)$$

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Crucially:

- ▶ Competence is not entailed by cooperativity.
- ▶ It is merely entailed by cooperativity *plus what is said*.

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Existing approaches (since forever):

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Beware:

- ▶ Speakers need not reason in terms of alternatives.

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- ▶ If pragmatic reasoning is sensitive to *attentive content* (which it must be, to distinguish between (5b) and (5c));
- ▶ then *exhaustivity is a conversational implicature*.

End of Part I

Part II: Intonation and exhaustivity

5. Focus
6. The final rise

5. Focus

- 5.1. Prerequisites for exhaustivity
- 5.2. Domain restriction
- 5.3. Focus
- 5.4. Hungarian vs. English focus
- 5.5. Some more predictions
- 5.6. But... experiments!

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- ▶ It only depends on a mutual assumption of cooperativity.
- ▶ In particular, the QUD must be mutually known, i.e.:
 - ▶ The *kind* of question.
 - ▶ The *domain* of relevant alternatives.
- ▶ The *kind* of question must be reflected by *focus*.

(8) Who came to the party?

[John]_F came to the party. / # John came to the [party]_F.

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(cf. Bob's work on typicality.)

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Hungarian focus is *more* exhaustive (Szabolcsi, 1981):

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And finally:

(4) # Not sure about Mary, but - of J, B, M - John and Bill came.

(2) (Uttered when speaker is known not to be competent)

Bonnie stole [some]_F of the pears.

5.6. But... experiments!

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6. The final rise

- 6.1. The sentence-final rise
- 6.2. Deriving the readings
- 6.3. General results
- 6.4. Contrastive topic (work in progress)
- 6.5. The bigger picture

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(17) Of John, Bill and Mary, who came to the party?

John came ↘.

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c. John came ↗^H.

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This proposal is new in its generality, not in spirit.

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| 3. $s \subseteq \overline{p} \cup q $ or $s \subseteq \overline{p} \cup \overline{q} $ | (Quality) |
| 4. The speaker thinks she is clear, concise, etc. | (Quantity) |
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| ✓ ...wait, there's more. | (Quantity) |
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- (18) Of J and M, who came to the party?
John came ↗.
- | | |
|--|--------------------------------|
| 1. $s \subseteq p $ | $(p \vee q \vee (p \wedge q))$ |
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| 3. $s \subseteq \overline{p} \cup q $ or $s \subseteq \overline{p} \cup \overline{q} $ | (Quality) |
| 4. The speaker thinks she is clear, concise, etc. | (Quantity) |
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Noteworthy:

- ▶ For the Relation readings, *attentive content* is crucial.
- ▶ In all but the last reading, exhaustivity is absent.

6.4. Contrastive topic

Work in progress

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A compositional account in terms of the final rise:

- ▶ Construct QUD and assertion in parallel.
- ▶ Nuclear stress influences how the QUD is built up.
- ▶ Rise indicates a maxim violation for the assertion relative to the QUD *at that point in the derivation*.

6.5. The bigger picture

In English (and related languages)

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- ▶ Discourse particles ('well', 'actually', 'by the way')
- ▶ Facial expressions, gestures, ...

End of Part II

7. Main conclusions

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Part I: Exhaustivity is a conversational implicature

- ▶ If pragmatic reasoning is sensitive to *attentive content*
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Part II: Intonation and exhaustivity

- ▶ Focus enables us to make strong predictions.
- ▶ Beware of implicit domain restrictions and intonation.

The End

Papers (see staff.science.uva.nl/~westera/)

- ▶ *Exhaustivity through the maxim of Relation*
(LENLS proceedings)
- ▶ *'Attention, I'm violating a maxim!'*
(SemDial proceedings, Amsterdam, next month)
- ▶ *Contrastive topic and non-cooperativity*
(To be presented at QID, Amsterdam, next month)

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Grice on cancellability

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[...] since it is possible to opt out of the observation of [the Cooperative Principle], it follows that a conversational implicature can be cancelled in a particular case.

(p.57)

Textbook examples

Some typical examples of cancellation:

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For a consistent speaker to make a conversational implicature and subsequently cancel it.

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4. The speaker would be either uncooperative, or inconsistent.

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In sum:

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This makes the Gricean story much more *generative*...

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(9) Each of the students read Othello or King Lear.

~ Each of the students didn't read both.

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Many 'embedded' implicatures are in fact predicted.

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(Alternatively, use a *final rise*...)

Semantics

Restriction

A restricted to b , $A_b := \{a \cap b \mid a \in A, a \cap b \neq \emptyset\}$

Semantics (Roelofsen, 2011)

1. $[p]$ = $\{\{w \in \mathbf{Worlds} \mid w(p) = \text{true}\}\}$
2. $[\neg\varphi]$ = $\{\overline{U[\varphi]}\}$ if $\overline{U[\varphi]}$ is nonempty; \emptyset otherwise.
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Minimally, the semantics must lack the *absorption laws*:

- ▶ Absorption: $p \vee (p \wedge q) \equiv p \equiv p \wedge (p \vee q)$

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- ▶ Wh-words are existential quantifiers over sets.

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Besides: this is the only way.

Focus vs. 'only'

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The foregoing is not to say that focus 'means' 'only':

- (14) If [John]_F was there, Mary was there. (c.f., Horn, 1972)
≠ If only John was there, Mary was there.
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≠ Only John was there, and only Mary.

But at least for 'simple' sentences:

- ▶ '[Subject]_F predicate' \rightsquigarrow 'only [Subject]_F predicate'.

Formal results

Recall: A entails Q , $A \models Q$, iff

(i) $\cup A \subseteq \cup Q$; and

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(7) Did John go to the party?

It was raining. \rightsquigarrow If it rained, John {went / didn't go}.

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Within a world, everything is related.

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Just as [logical consequence] rules the validity of argumentation, [logical relatedness] rules the coherence of information exchange.

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Dogs are mammals.

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- ▶ Final rise: 'For some maxim, I'm not sure whether or how I comply with it'.

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