Meanings as Proposals: an Inquisitive Approach to Exhaustivity

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Genève, ICL, July 26th 2013

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Long live Grice!
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Goal of this talk

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Wrong, it does!

Outline

1. Diagnosis
2. Solution
3. Conclusion
4. Related concepts and puzzles

1. Diagnosis

(2) a. Which colours (among red, green and blue) does John like?
b. He likes blue. $\rightsquigarrow$ *He doesn't like red*
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maxim of Relation

2. Solution

2.1. Translation into logic

(3) a. Which colours (among red, green and blue) does John like?

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(3) a. There are colours (among red and blue) that John likes.
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(3) a. John likes blue, red, or blue and red. $p \vee q \vee (p \wedge q)$

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(3a) $[p \vee q \vee (p \wedge q)]$ (3b) $[p]$ (3c) $[p \vee (p \wedge q)]$

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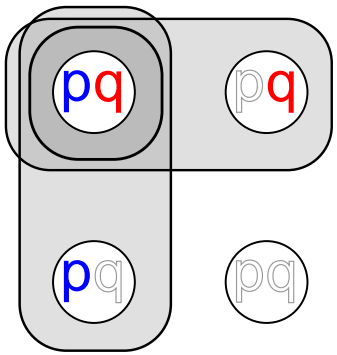
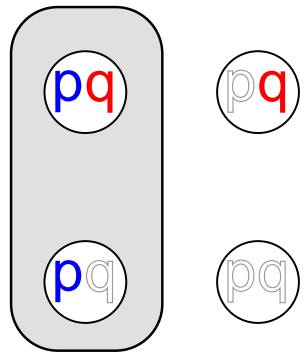
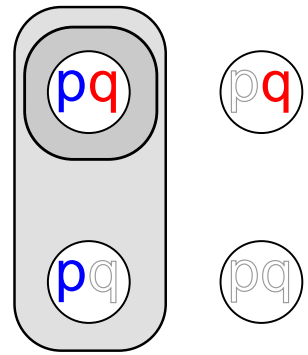


(3a) $[p \vee q \vee (p \wedge q)]$



(3b) $[p]$



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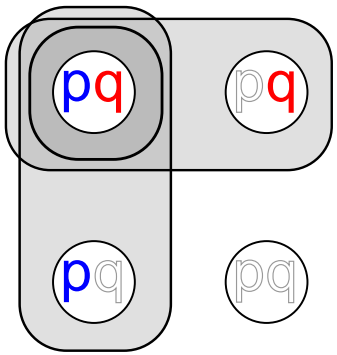

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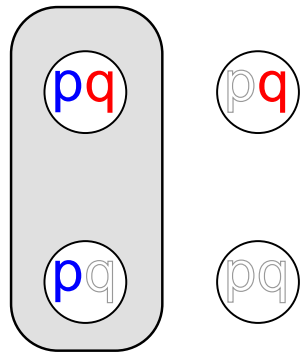

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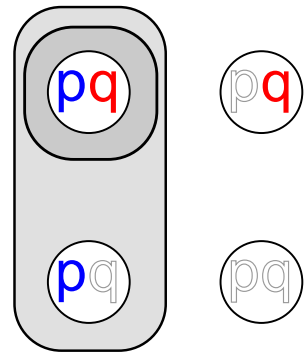

(3c) $[p \vee (p \wedge q)]$

Entailment

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

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

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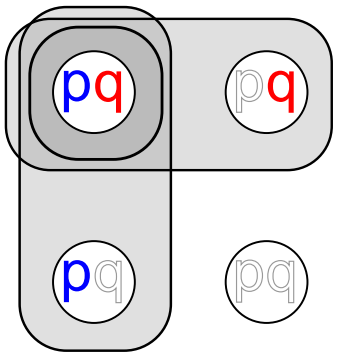

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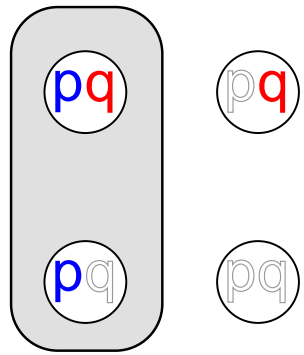

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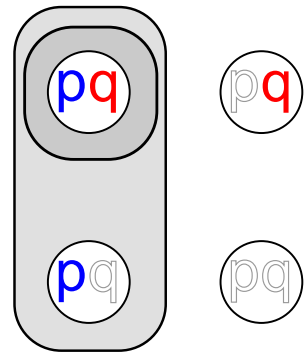

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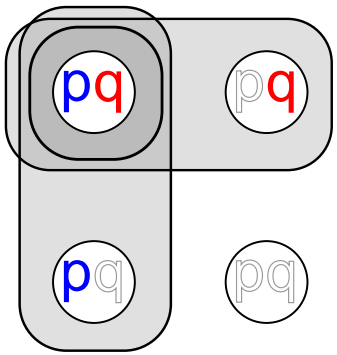

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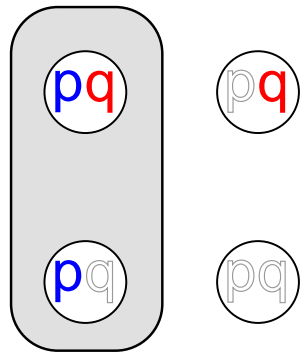

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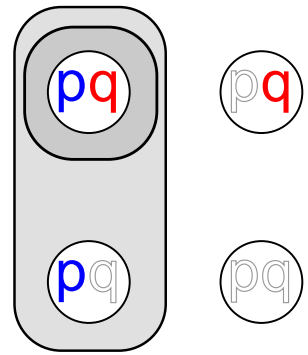

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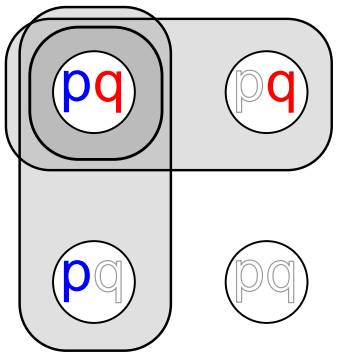

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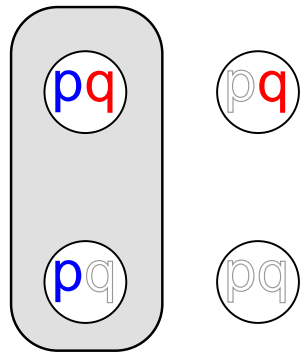

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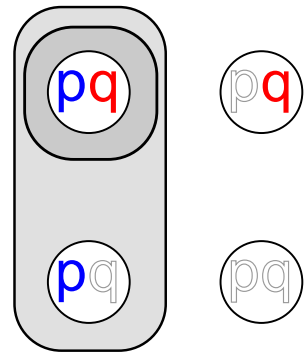

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Now, (3c) $\vDash$ (3a), but (3b) $\nvDash$ (3a).

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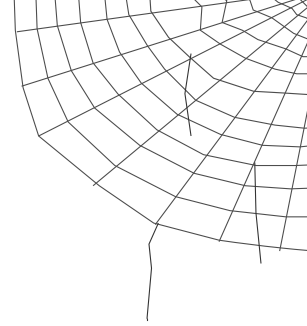

The relevant maxims

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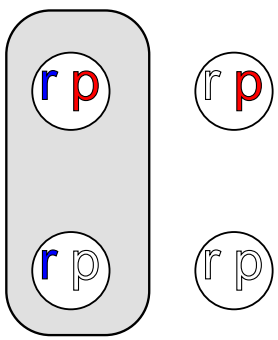

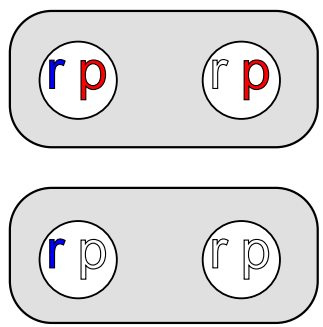

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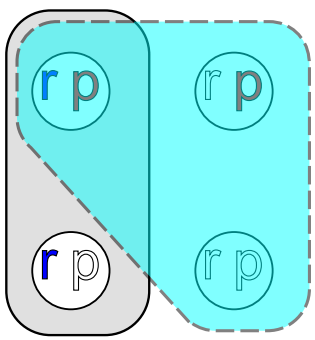

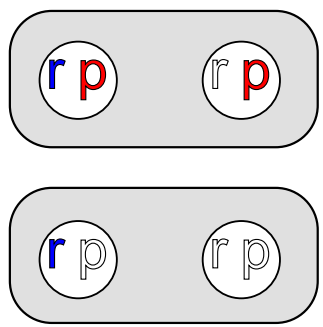

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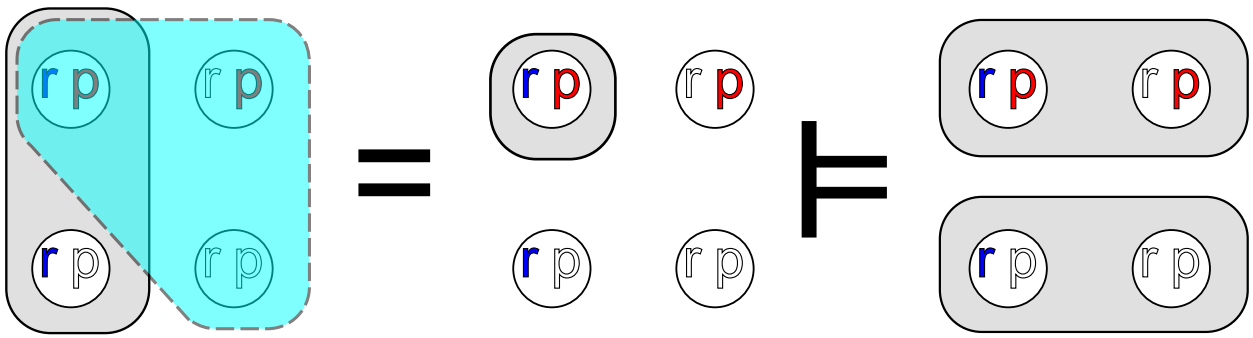

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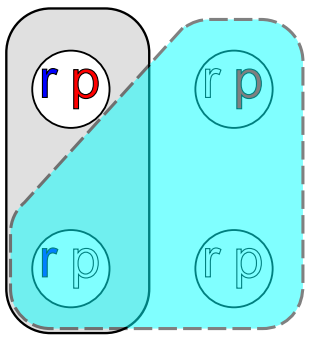

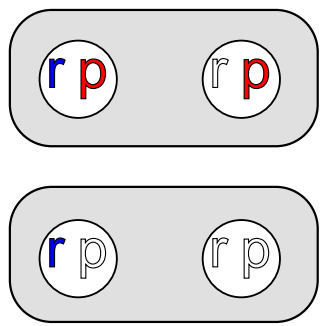

2.3. Pragmatics

The relevant maxims

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

1. **Quality**: $s \subseteq \bigcup R$.
2. **Quantity**: For all $Q' \subseteq Q$, if $s \subseteq \bigcup Q'$ then $\bigcup R \subseteq \bigcup Q'$.
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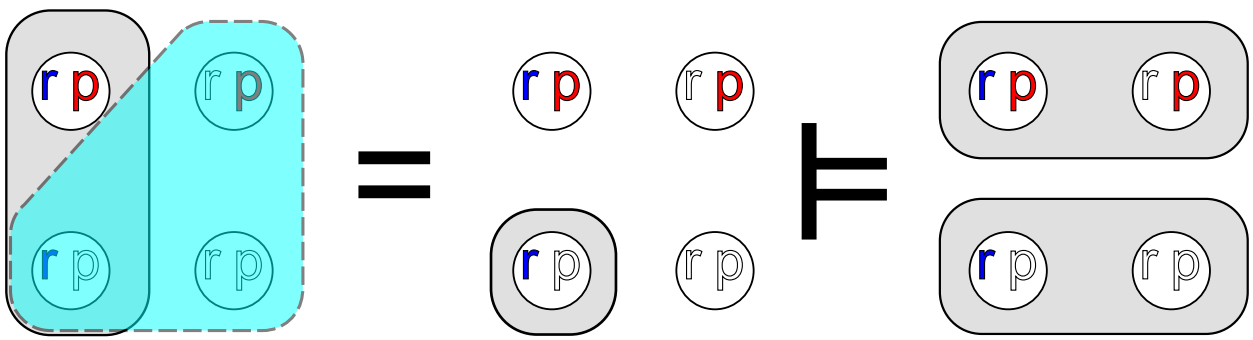

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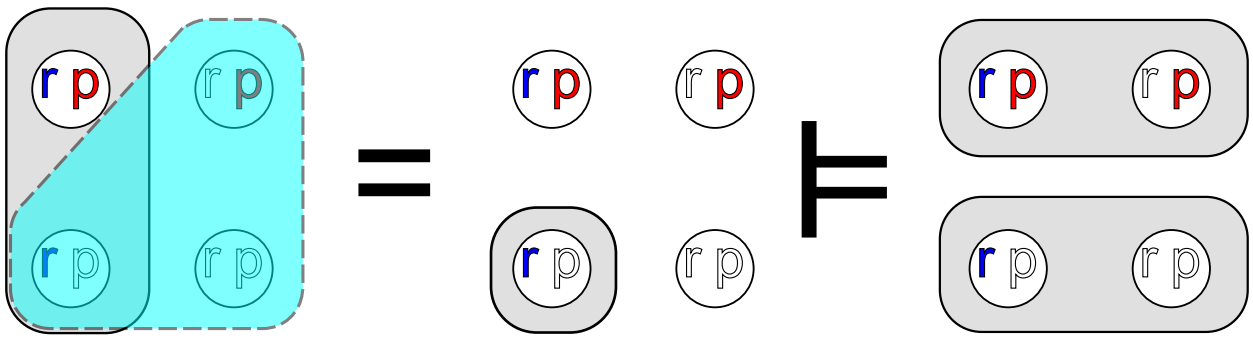

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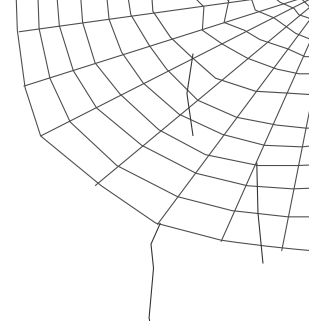
(cf. Groenendijk and Stokhof, 1984; Roberts, 1996; Spector, 2007)



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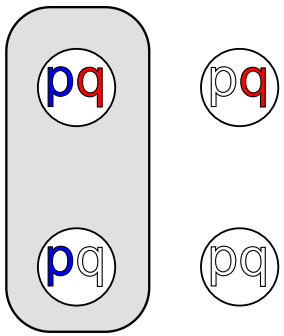

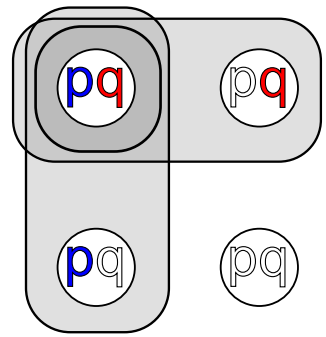

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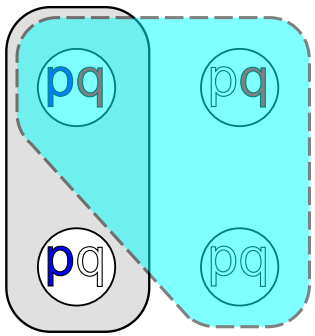

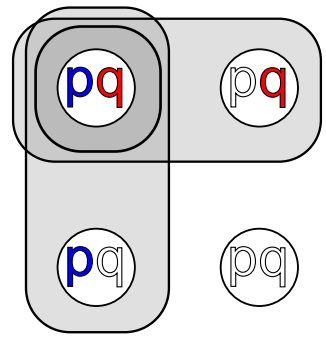

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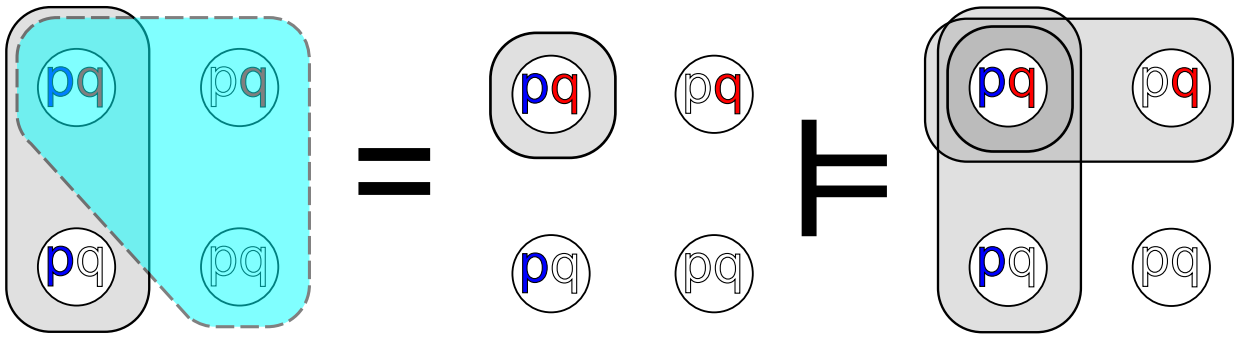

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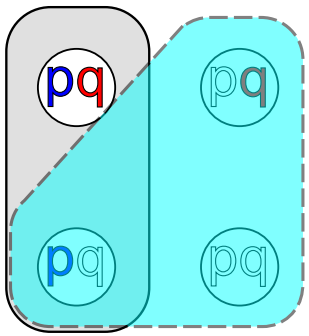

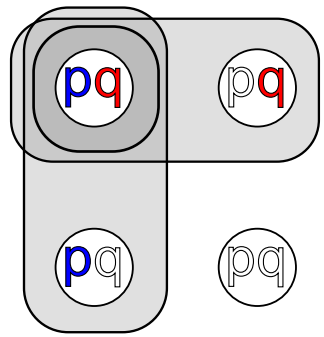

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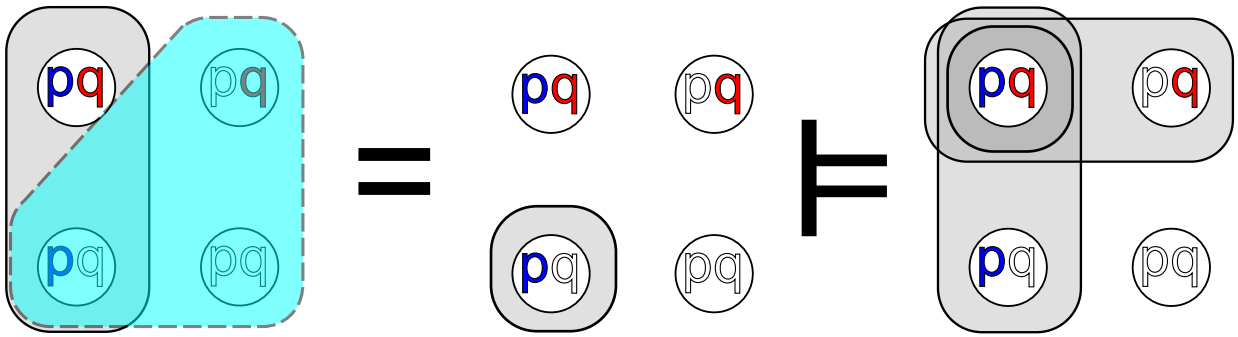

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Take-home messages:

- Pragmatic reasoning is sensitive to attentive content.
- *Exhaustivity implicatures are conversational implicatures*.

4. Related concepts and puzzles

4.1. The opinionatedness assumption

Most existing work (Sauerland, 2004):

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Counterexample:

(5) I'm asking the wrong person, but which colours does J. like?
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Instead, in my approach:

- Opinionatedness follows from Quality + Relation implicatures

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Existing approaches (since Gazdar, 1979?):

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More take-home messages

- The 'alternatives' are fully determined by the maxims.
- Speakers need not reason in terms of alternatives.

4.3. 'Embedded' implicatures

Chierchia, *et al.* (2008), and much subsequent discussion

(6) Which books (among O. and K.L.) did every student read?
Every student read O. or K.L. $\rightsquigarrow$ No student read both.

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The 'embedded' implicature of (6) is in fact predicted.

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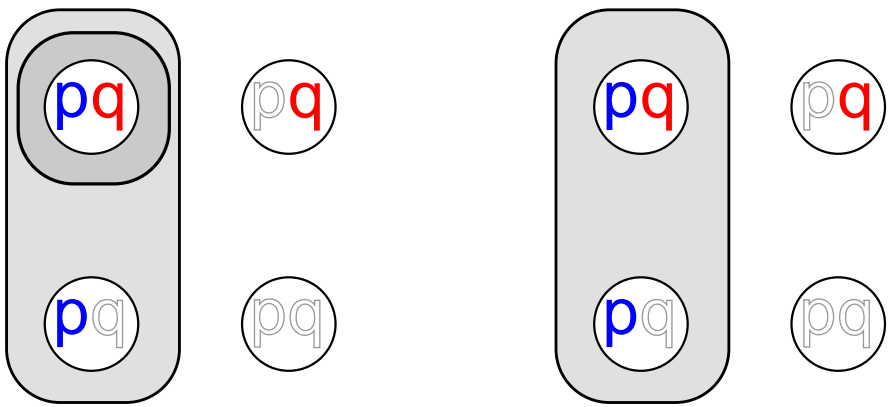

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E.g., in case of exhaustivity:

1. $s \subseteq |p|$ (Quality)
2. $s \nsubseteq |q|$ (Quantity)
3. $s \subseteq \overline{|p|} \cup |q|$ or $s \subseteq \overline{|p|} \cup \overline{|q|}$ (Relation)

---

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

4.6. One-sided/two-sided numerals

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(7) a. There are three apples. $\exists x.Ax \wedge |x| = 3$

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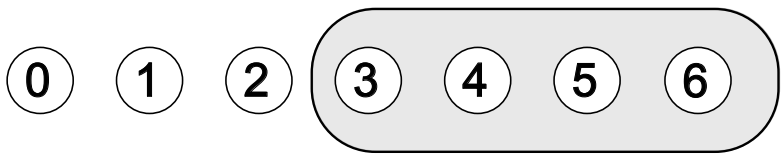
(7a) 

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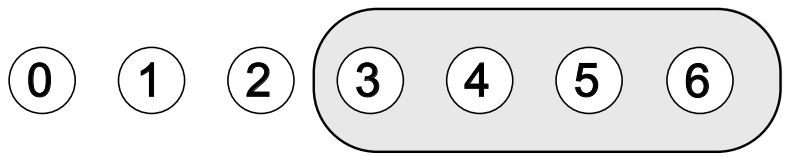
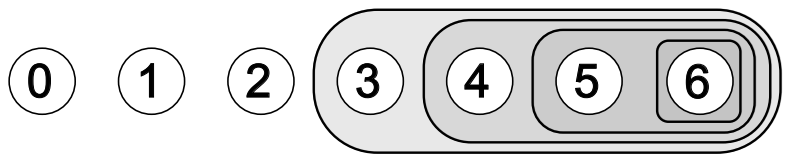
(7a) 

(7b) 

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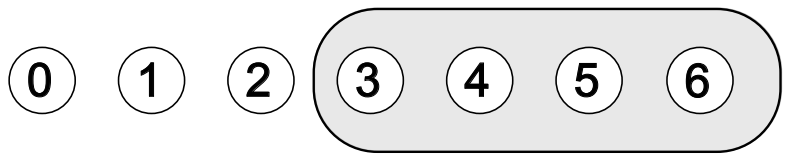
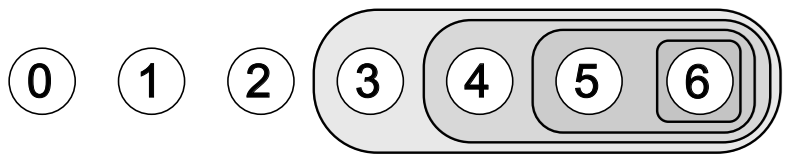
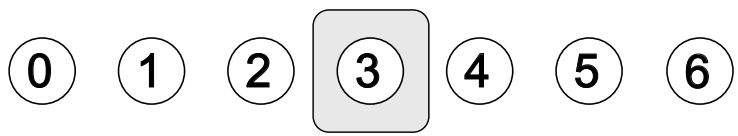
(7a) 

(7b) 

(7c) 

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(cf. Coppock and Brochhagen, 2013)

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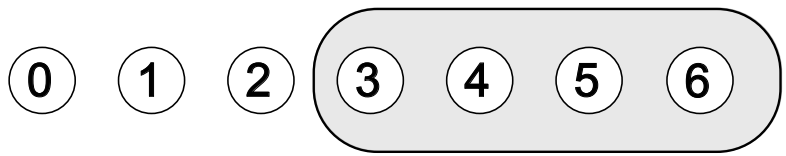
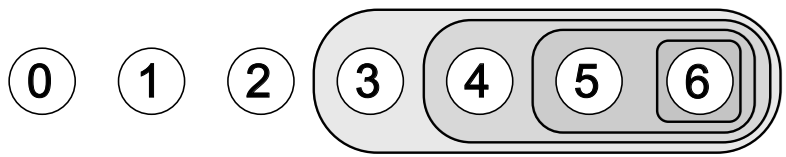
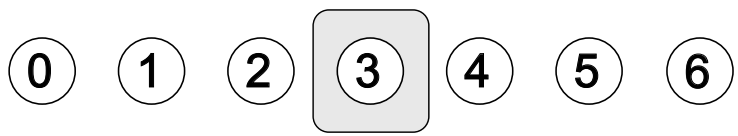
(7a) 

(7b) 

(7c) 

Fin.

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Article

- Attentive Pragmatics: Exhaustivity and the Final Rise. *ESSLLI StuS proceedings* (staff.science.uva.nl/~westera/)

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Appendix A. Semantics (Roelofsen, 2011)

Ingredients

- *Possibility*: a set of worlds (a, b)
- *Proposition*: a set of possibilities $(A, B, [\varphi])$
- *Informative content*: $|\varphi| := \bigcup[\varphi]$
- *A restricted* to b, $A_b := \{a \cap b \mid a \in A, a \cap b \neq \varnothing\}$

Semantics of relevant fragment

1. $[p] = \{\{w \in \textbf{Worlds} \mid w(p) = \text{true}\}\}$
2. $[\varphi \vee \psi] = ([\varphi] \cup [\psi])_{|\varphi| \cup |\psi|} = [\varphi] \cup [\psi]$
3. $[\varphi \wedge \psi] = ([\varphi] \cup [\psi])_{|\varphi| \cap |\psi|}$

Entailment

A entails B, $A \vDash B$, iff (i) $\bigcup A \subseteq \bigcup B$ and (ii) $B_{\bigcup A} \subseteq A$.

Appendix B. The final rise

To be presented at ESSLLI.

(7) Which colours (among red, green and blue) does John like?
He likes blue↗.

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Proposal

The final rise conveys *uncertain cooperativity*.

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- whether he likes red (Relation)

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Appendix C. References

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