On the possible pragmatic origins of inquisitiveness

Matthijs Westera
Universitat Pompeu Fabra
(University of Amsterdam)

Outline

1. Background & Motivation
2. Attentional pragmatics
3. Deriving something like Alternative Semantics

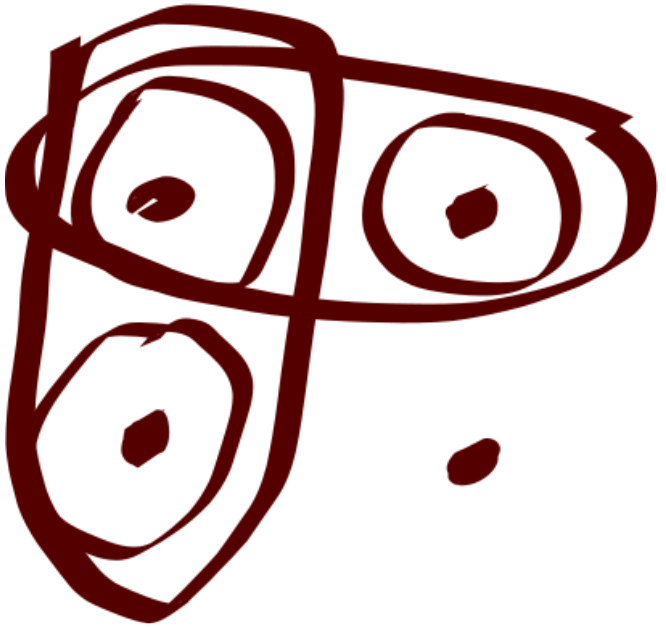
Outline

1. **Background & Motivation**
2. Attentional pragmatics
3. Deriving something like Alternative Semantics

$p \vee q$

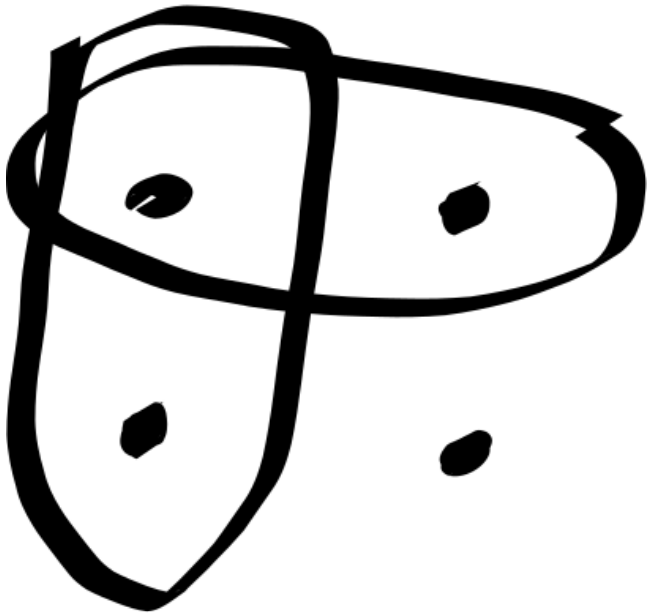
Inquisitive Semantics

$p \vee q$



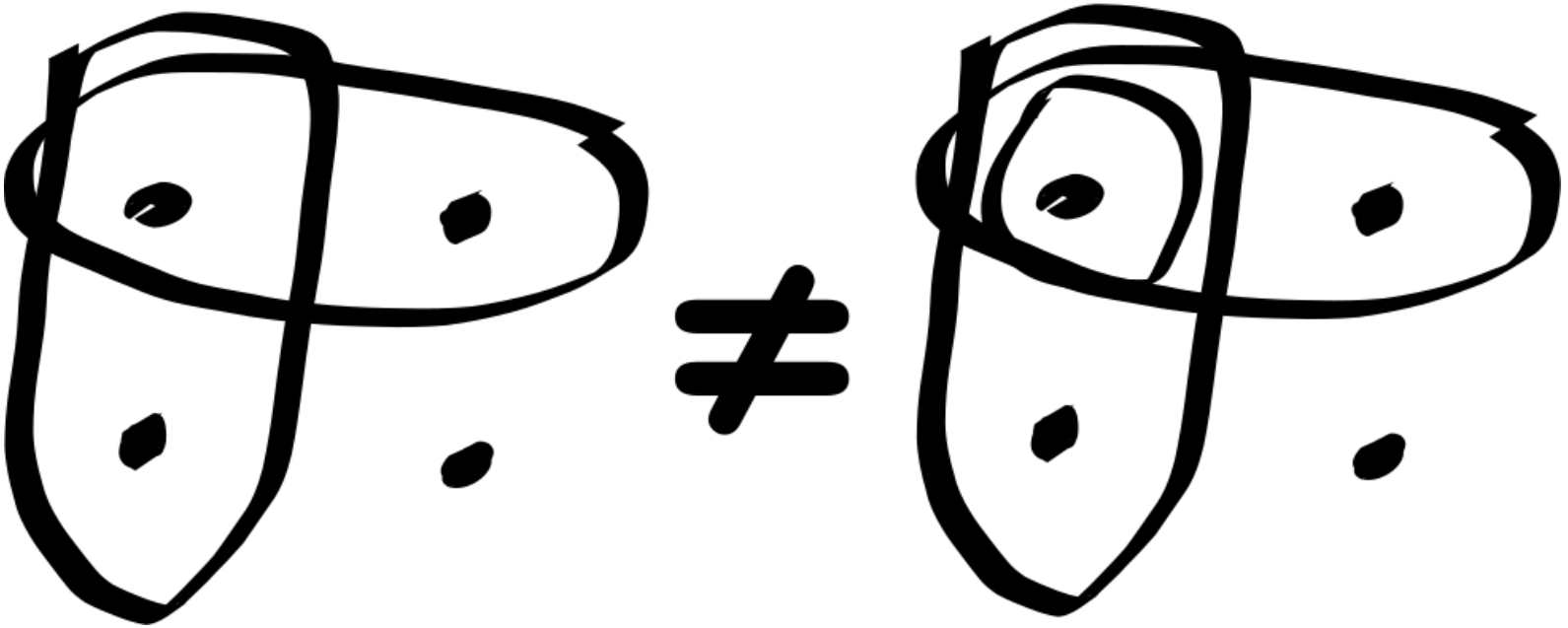
Alternative Semantics
(= Unrestricted inquisitive semantics)

p∨q



Alternative Semantics

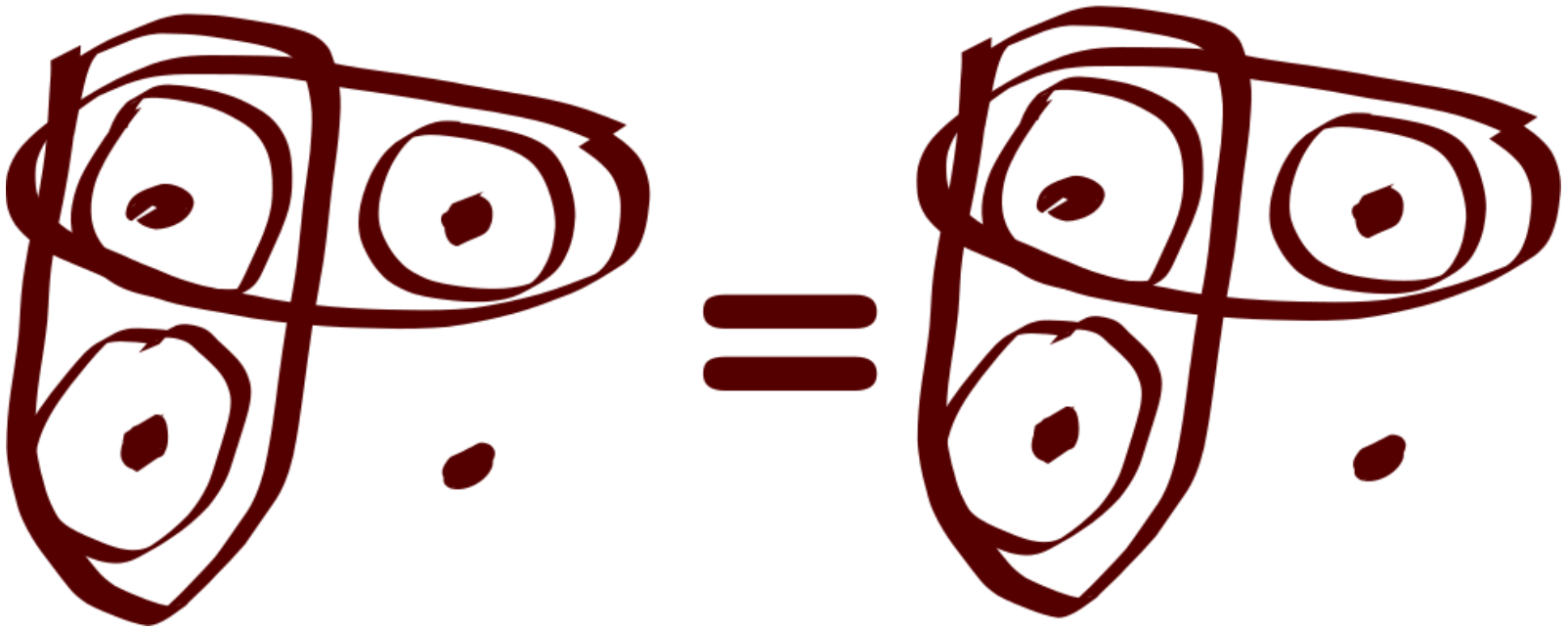
$p \vee q$ $\neq$ $p \vee q \vee (p \wedge q)$



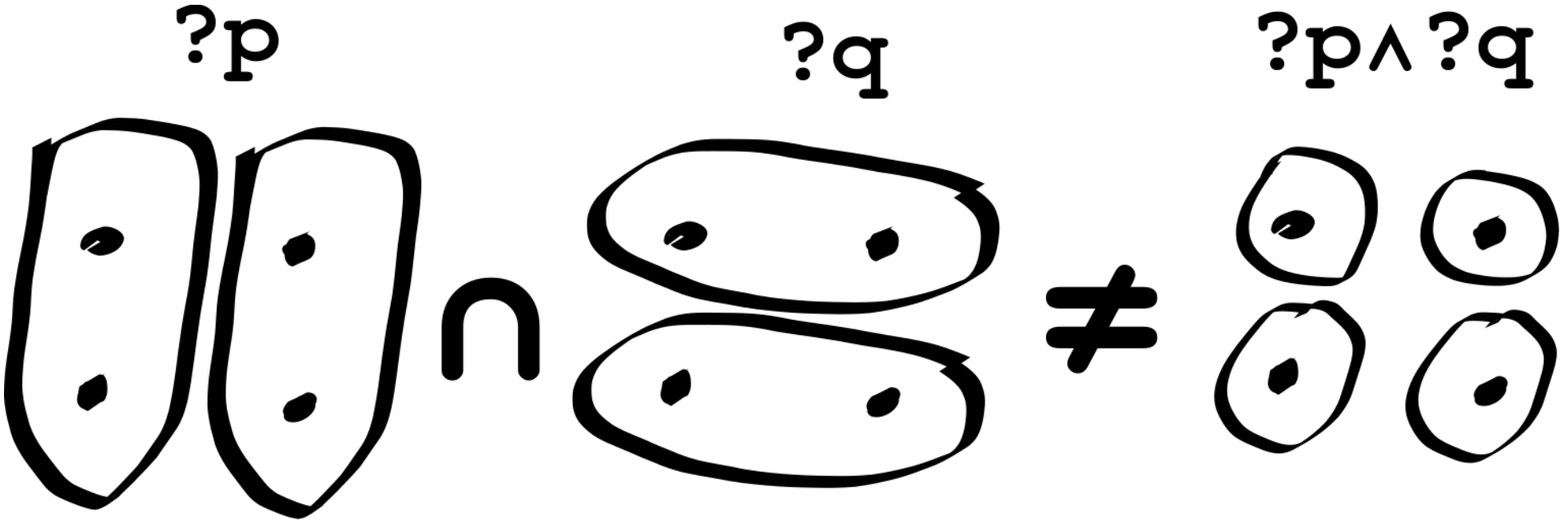
Inquisitive Semantics

p∨q

p∨q∨(p∧q)

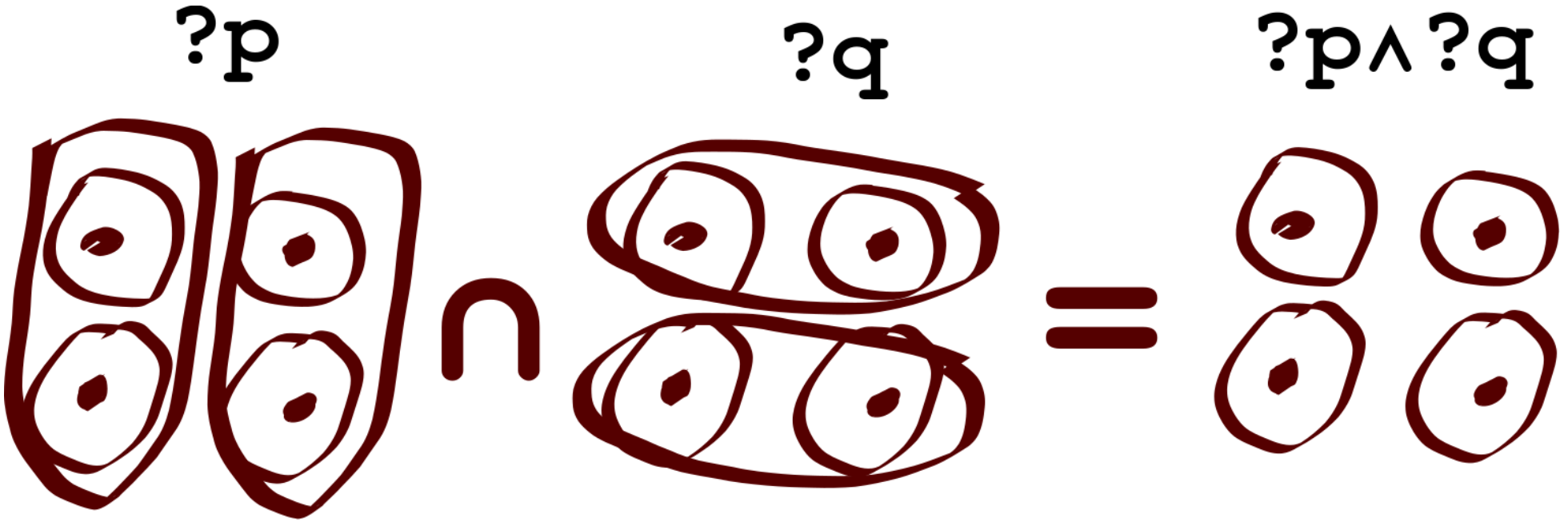


Alternative Semantics



Groenendijk & Stokhof 1984
Roelofsen 2013
Ciardelli 2017

Inquisitive Semantics



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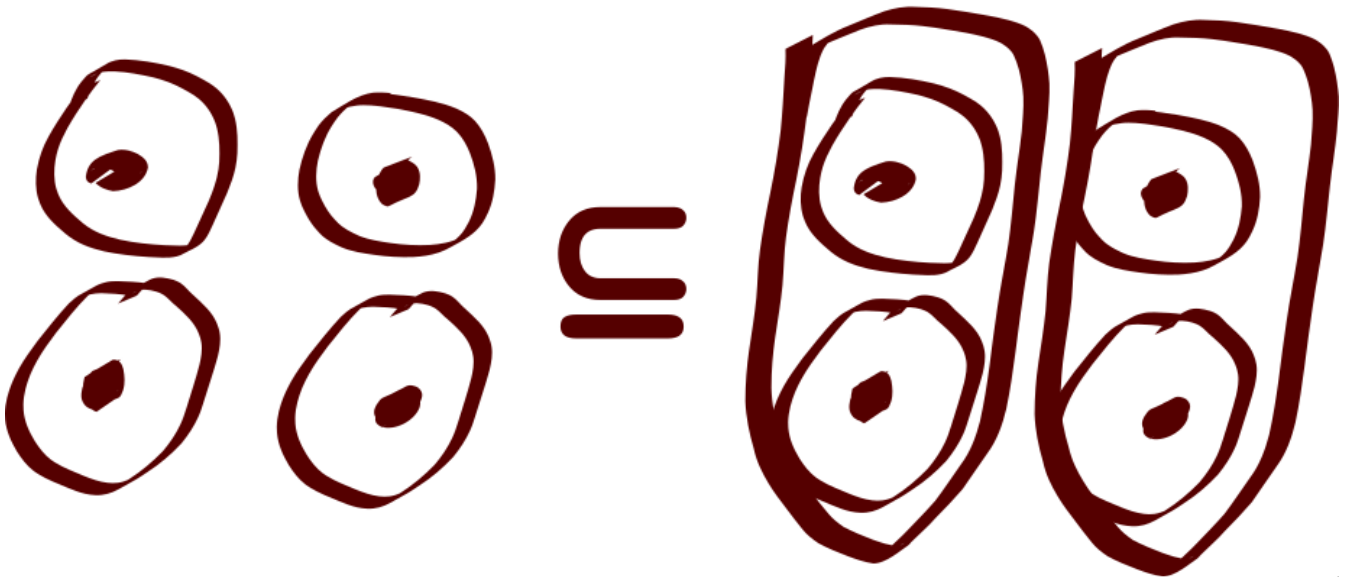
Inquisitive Semantics

$?p \wedge ?q \models ?p$



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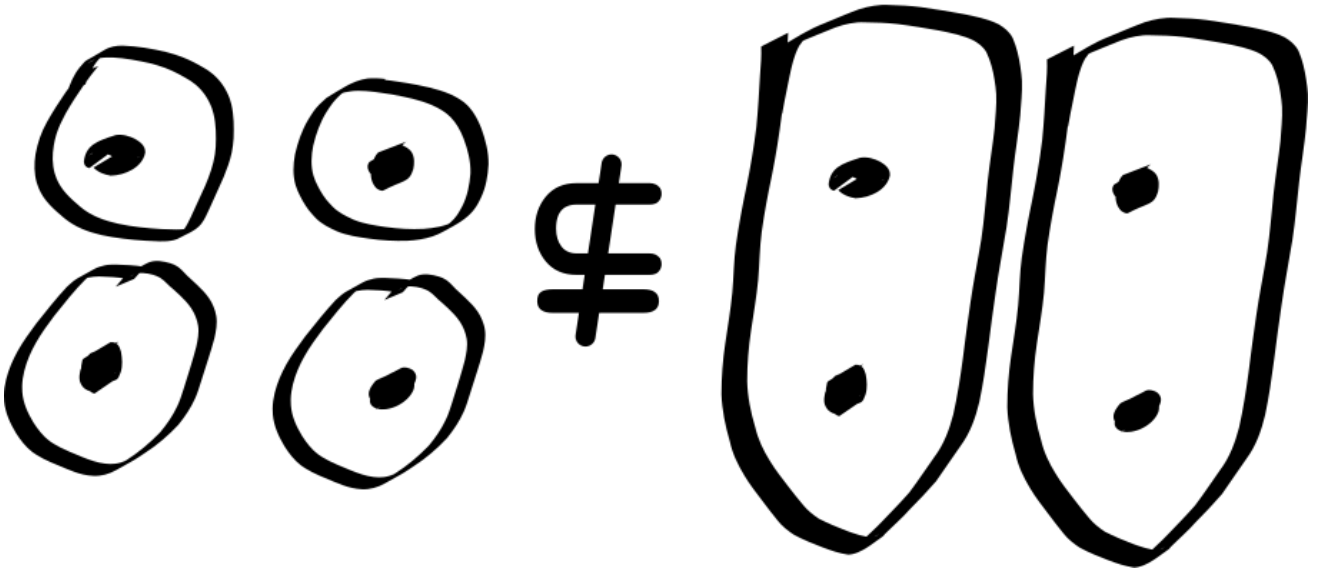

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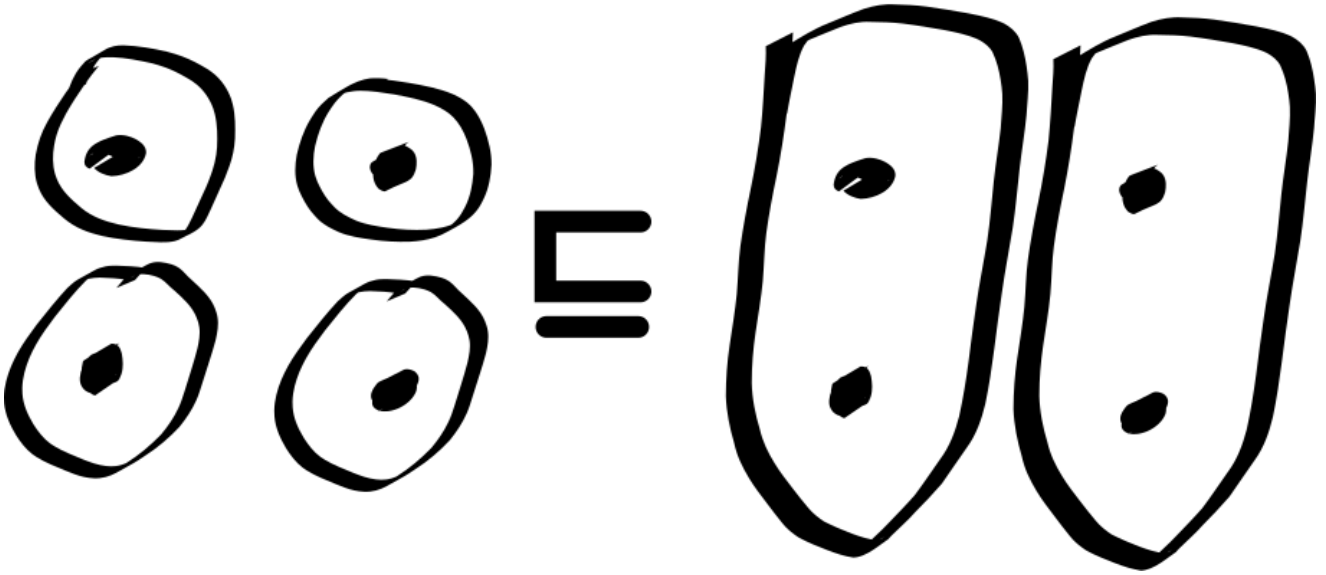

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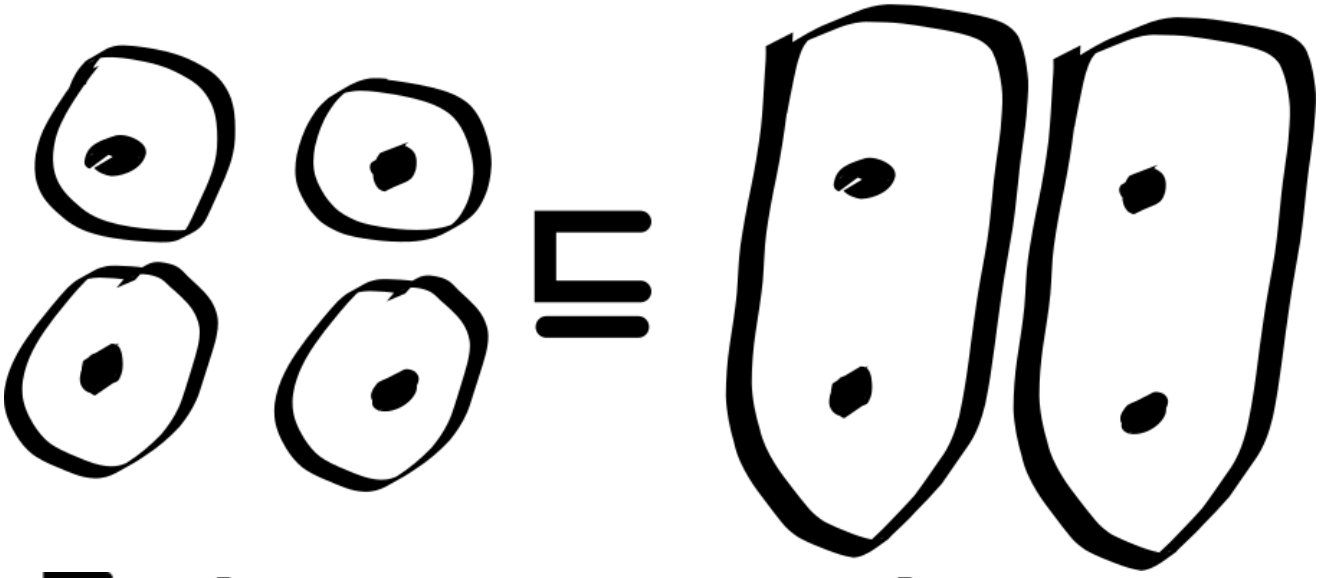

but $\sqsubseteq$ is not antisymmetric

Alternative Semantics

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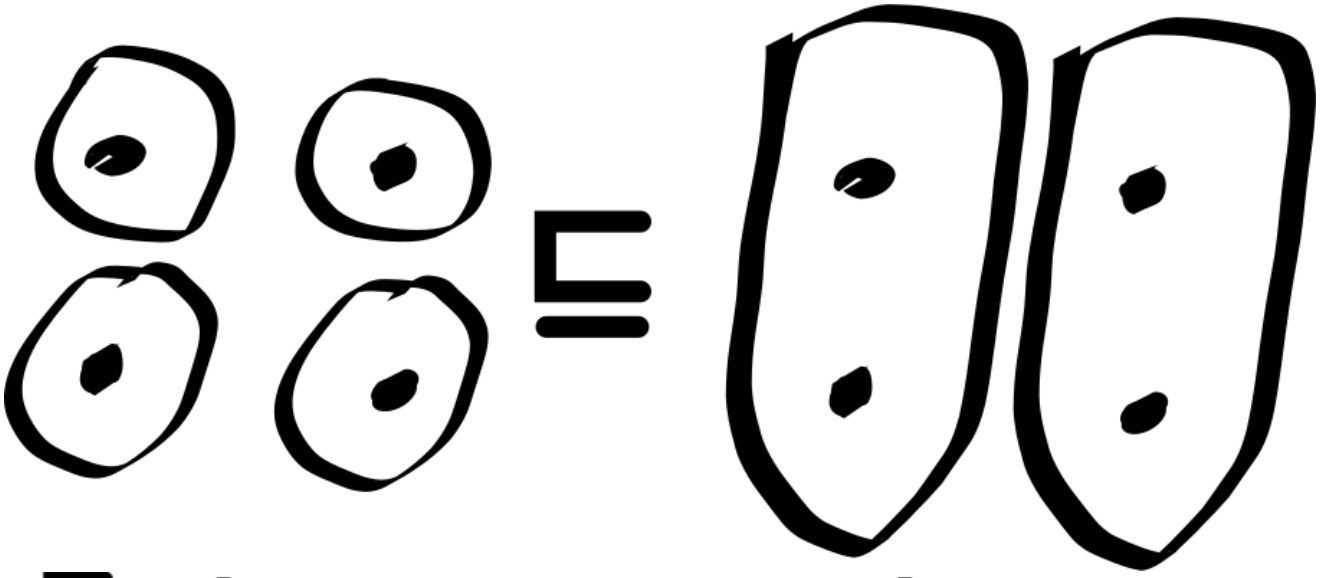

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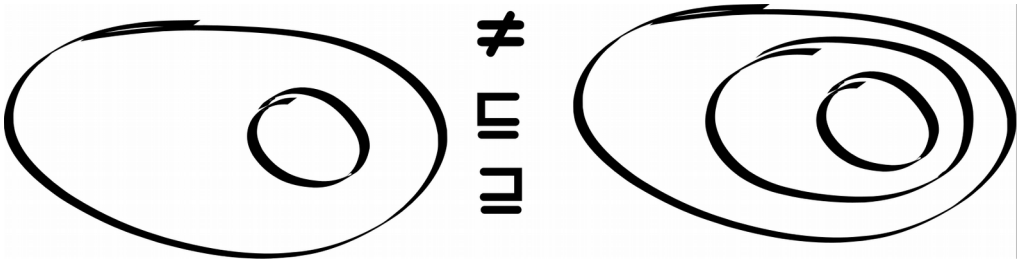
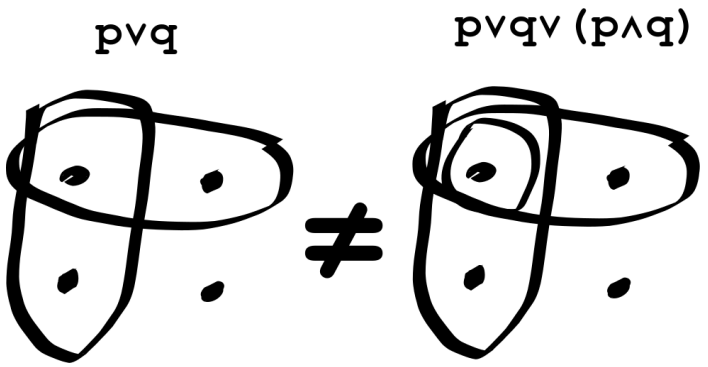
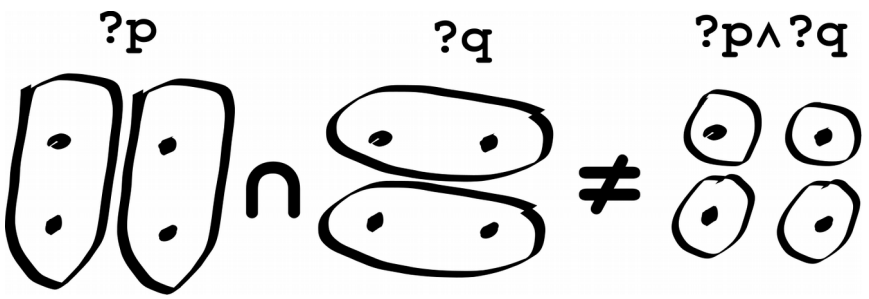
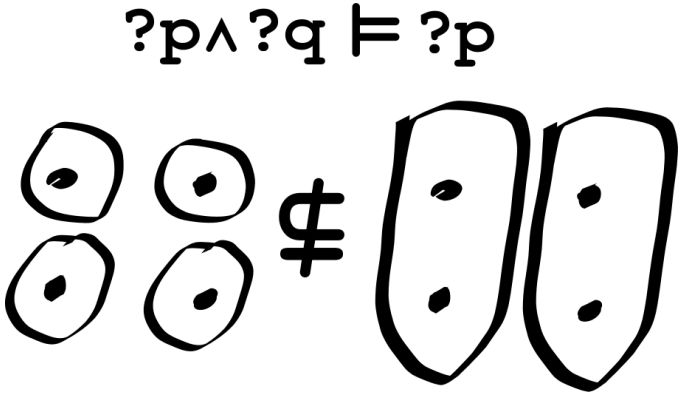


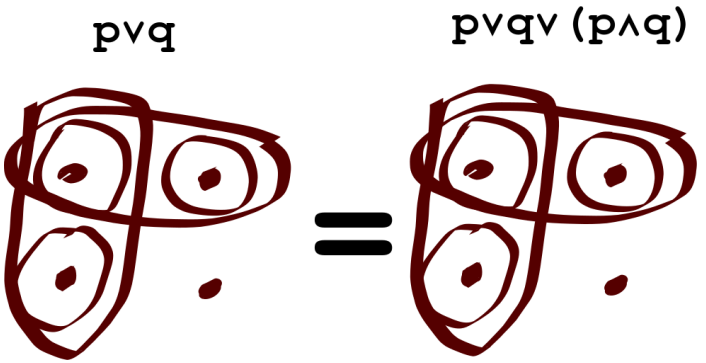
Alternative Semantics

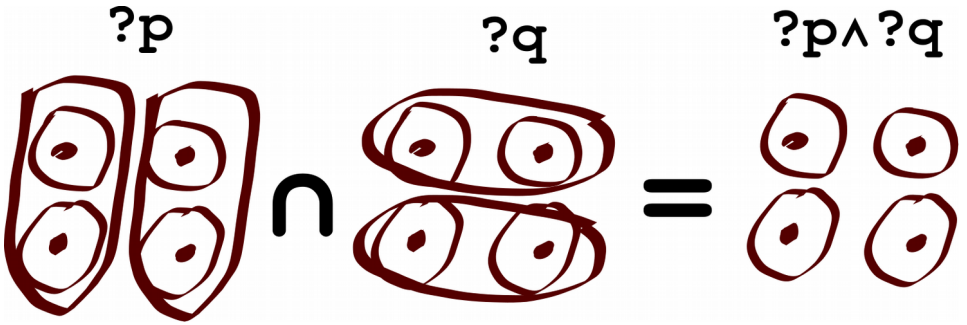


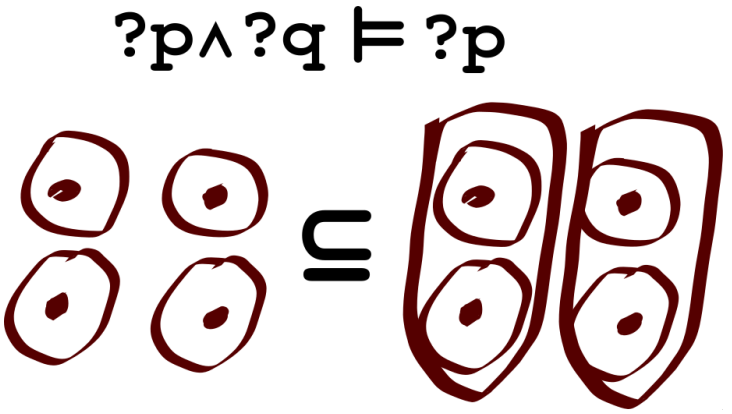




Inquisitive Semantics







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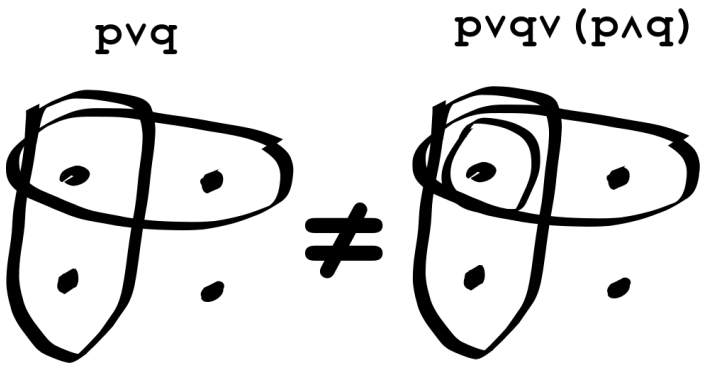

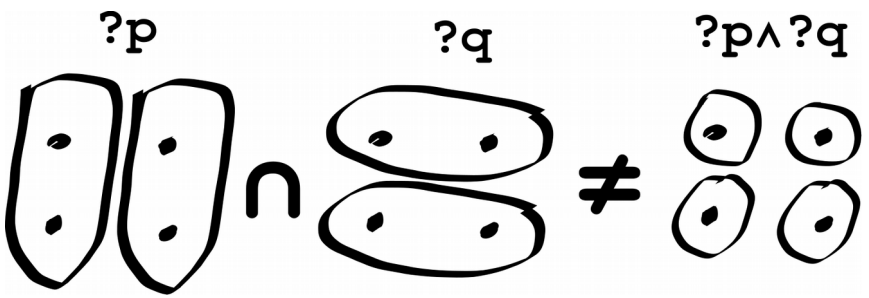

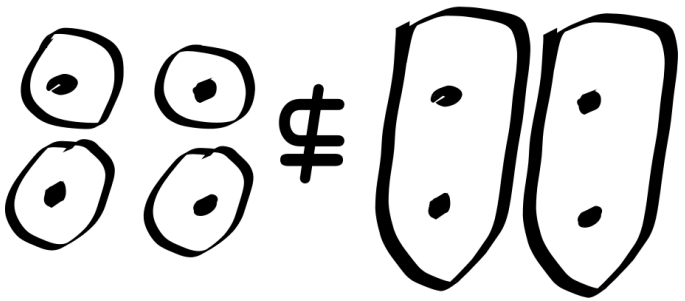

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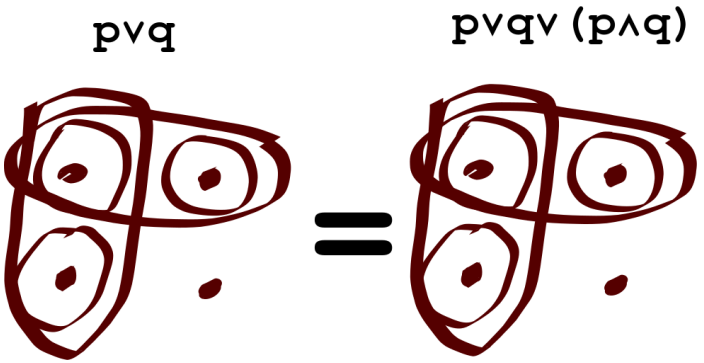

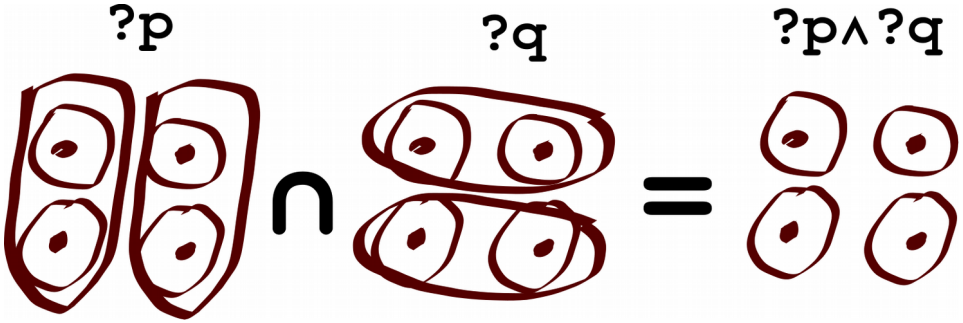

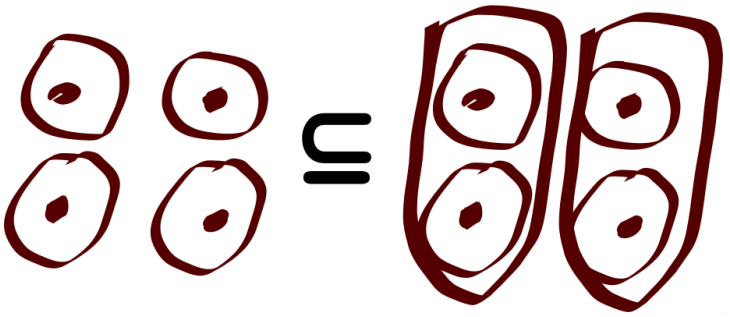

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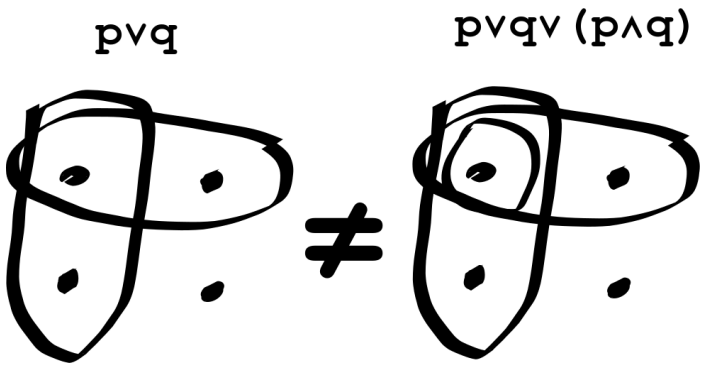
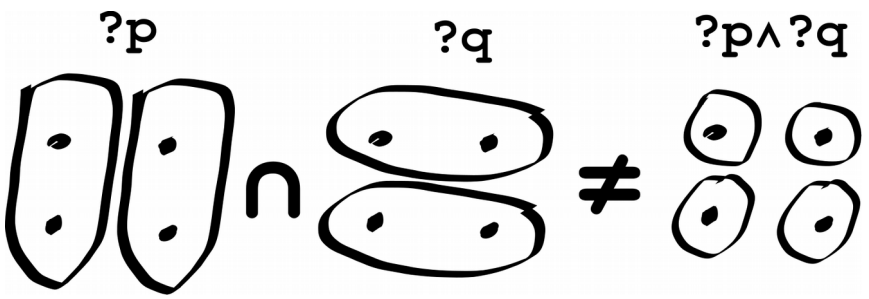
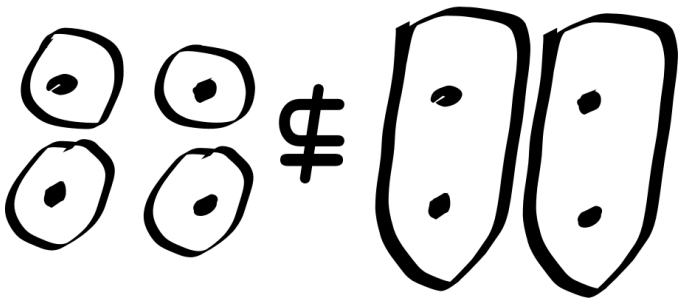




?p∧?q ⊨ ?p



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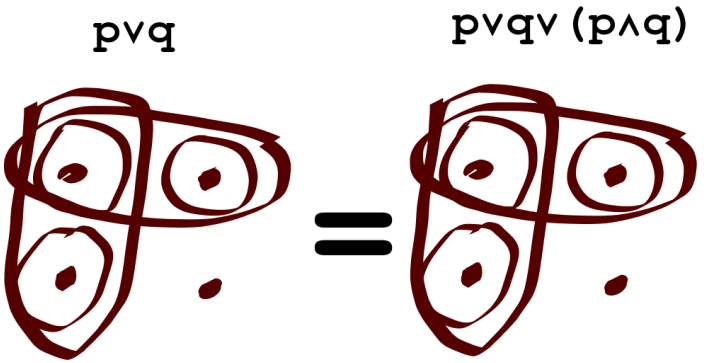

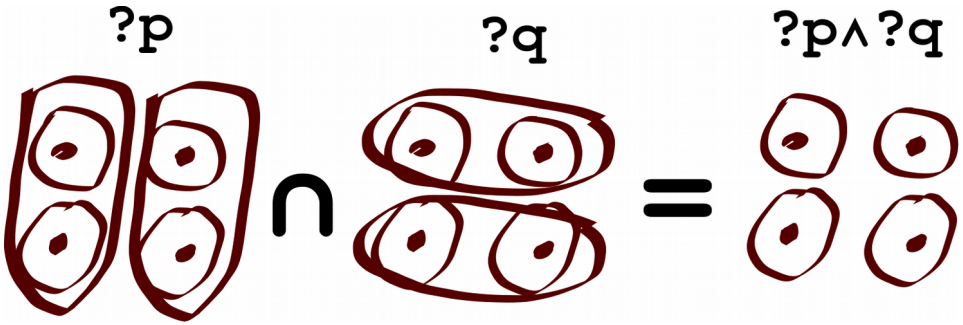

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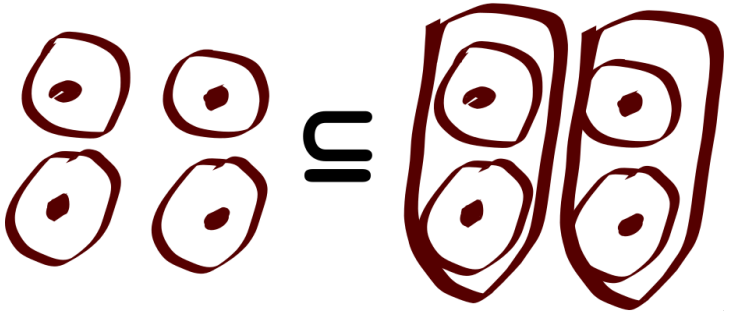

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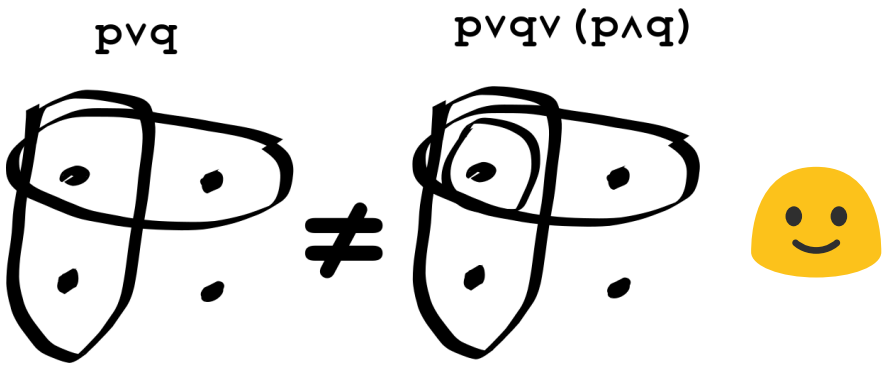

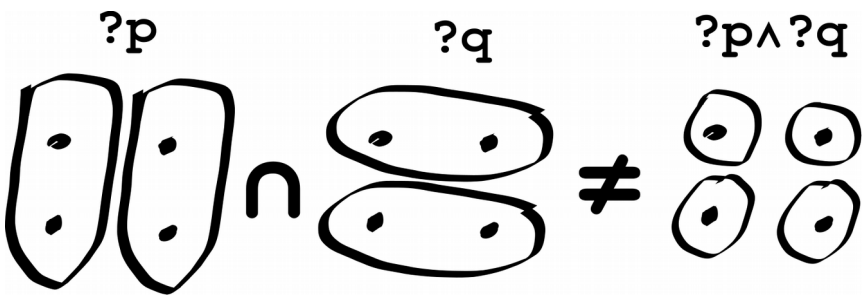

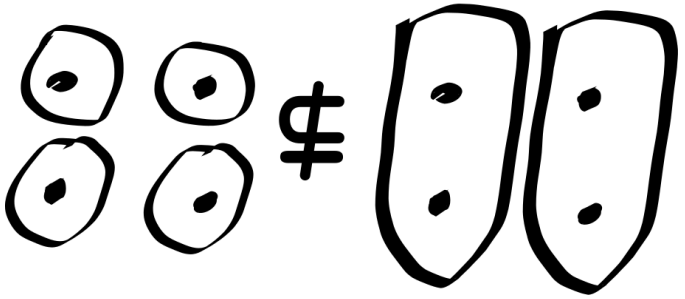

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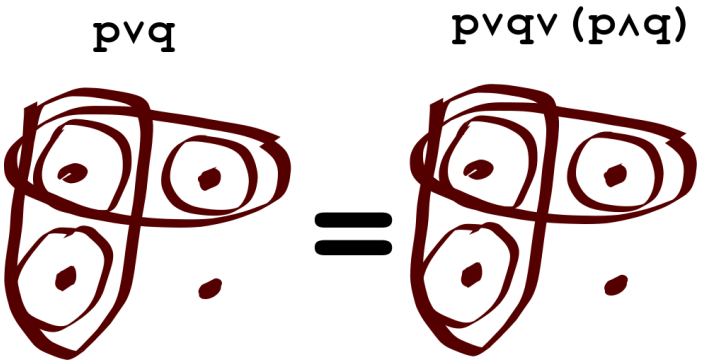

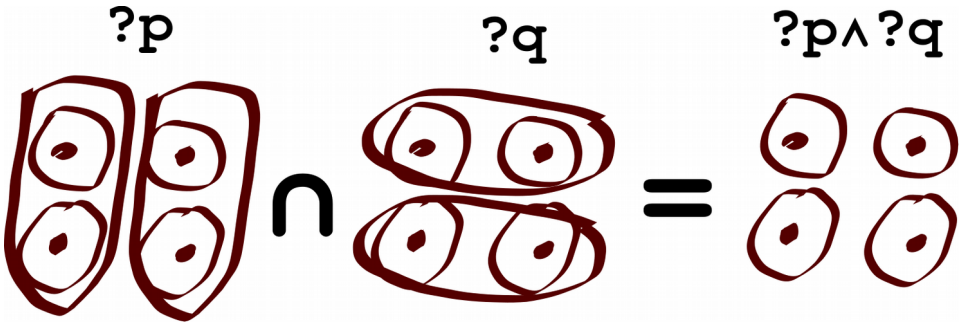

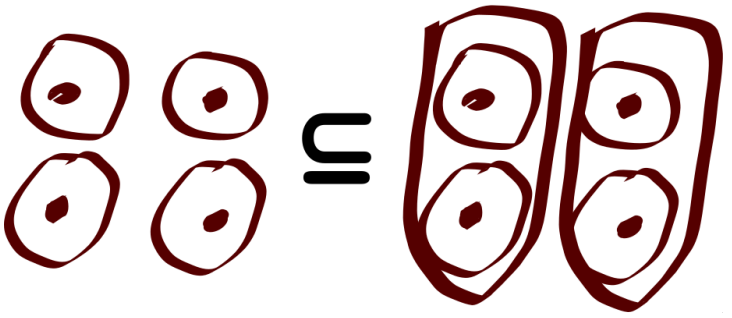

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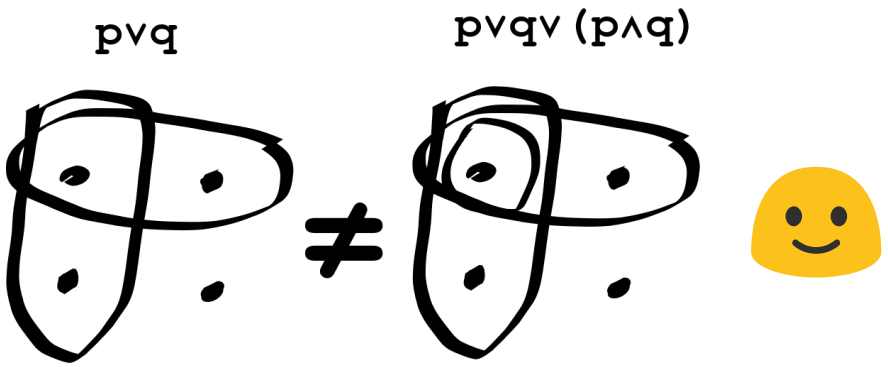

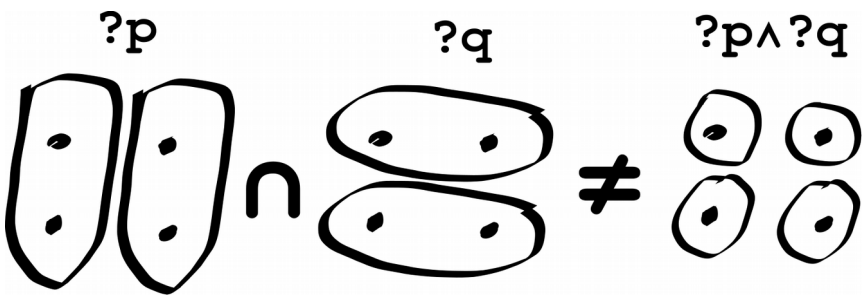

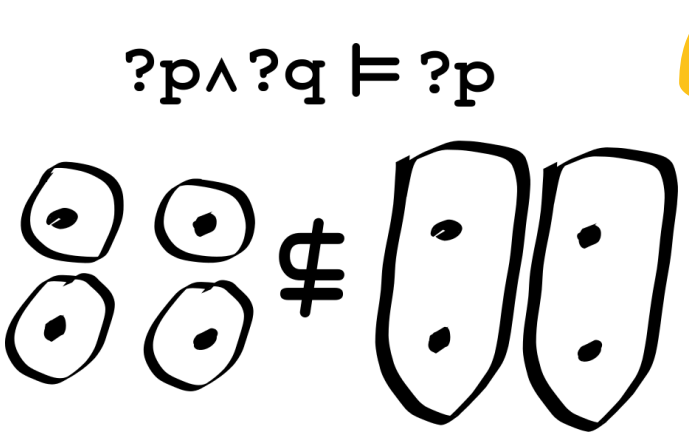

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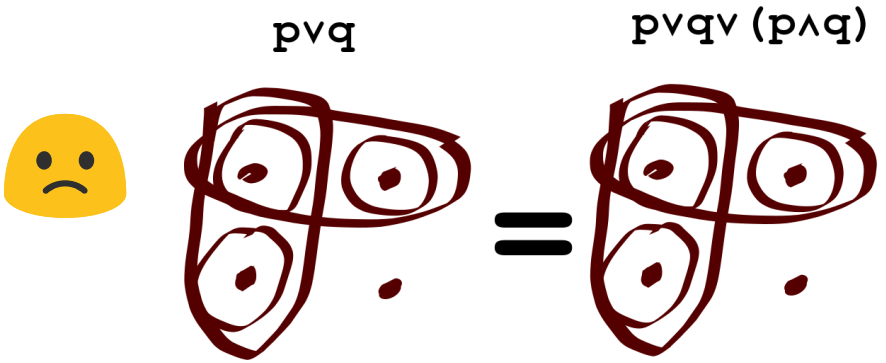

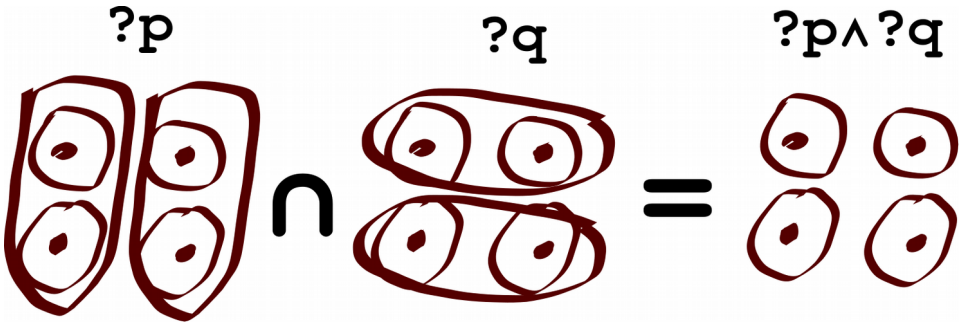

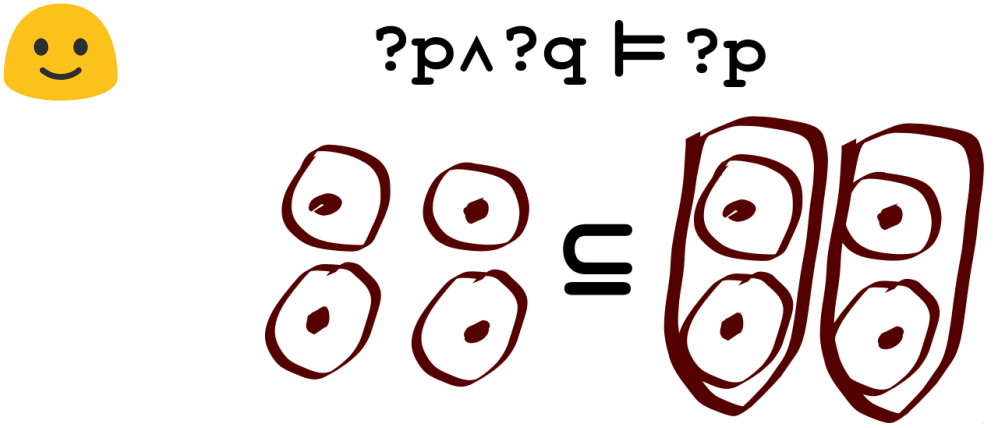

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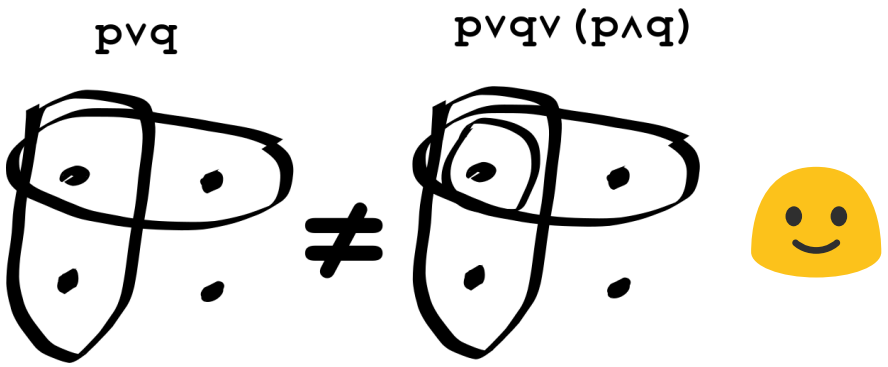

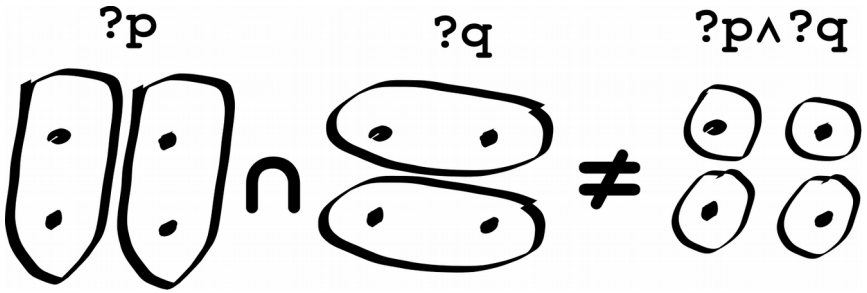

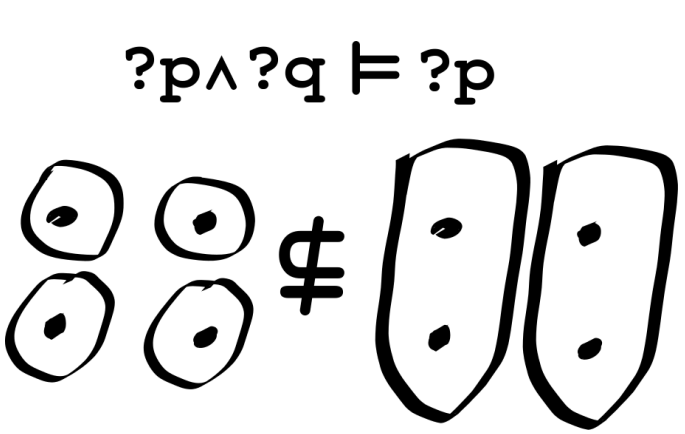

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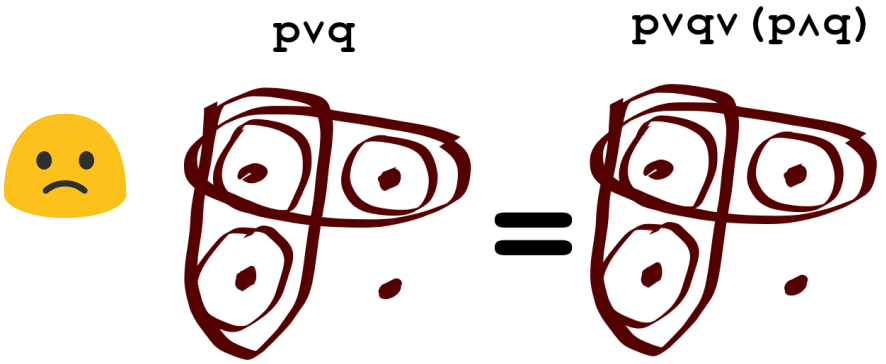

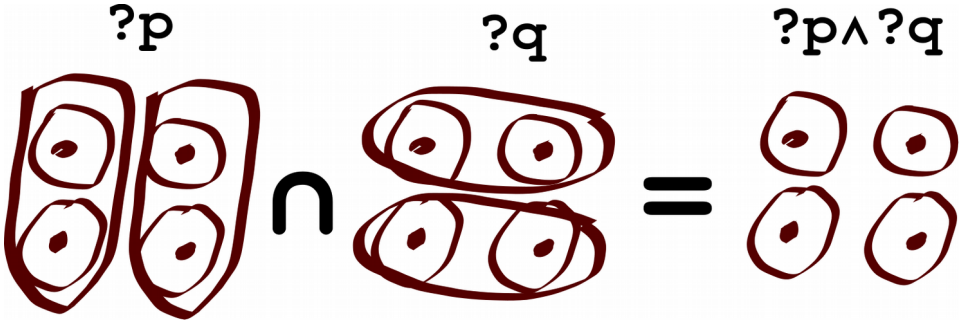

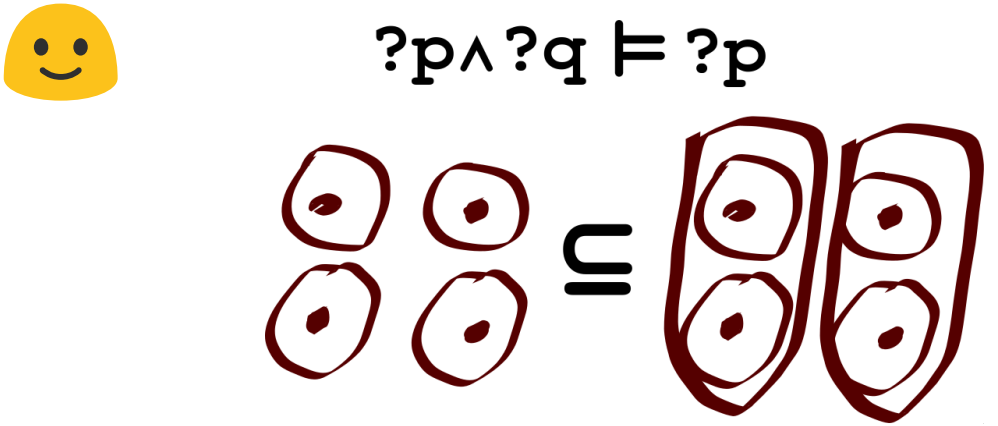

This talk

- Not sure about explanatory value of algebraic considerations...

Main question:
How (else) might we motivate something like Alternative Semantics?

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- E.g. why would ‘or’ but not ‘and’ introduce alternatives?

On the possible pragmatic origins of inquisitiveness

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Universitat Pompeu Fabra
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Outline

1. Background & Motivation
2. **Attentional pragmatics**
3. Deriving something like alternative Semantics

Attention

(1) John was at the party
or Mary was.

Attention

(1) John was at the party
or Mary was.

Attentional content:

Uttering a sentence draws attention to the (classical) denotations of all its parts.

Attentional *intent*

Attentional intent:

Set of things (propositions) to which the speaker *intended* to draw attention.

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Listeners & linguists:

- Which subset of the attentional content is the attentional intent?

(Westera 2017)

Attentional Pragmatics

I-maxims: For an informational intent p and a $\textsc{Qud}$ $\mathcal{Q}$:

$$\text{I-Quality}(p) = \Box^{\vee} p$$

$$\text{I-Relation}(\mathcal{Q}, p) = \mathcal{Q}(p)$$

$$\text{I-Quantity}(\mathcal{Q}, p) = \forall q \left(\left(\begin{array}{c} \text{I-Quality}(q) \wedge \\ \text{I-Relation}(\mathcal{Q}, q) \end{array} \right) \rightarrow (p \subseteq q) \right)$$

(Westera 2017)

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A-maxims: For an attentional intent $\mathcal{A}$ and a $\textsc{Qud}$ $\mathcal{Q}$:

$$\text{A-Quality}(\mathcal{A}) = \forall a \, (\mathcal{A}(a) \rightarrow \Diamond^{\vee} a) \qquad \textit{(first attempt)}$$

$$\text{A-Relation}(\mathcal{Q}, \mathcal{A}) = \forall a (\mathcal{A}(a) \rightarrow \mathcal{Q}(a))$$

$$\text{A-Quantity}(\mathcal{Q}, \mathcal{A}) = \forall a \left(\left(\begin{array}{c} \text{A-Quality}(\{a\}) \wedge \\ \text{A-Relation}(\mathcal{Q}, \{a\}) \end{array} \right) \rightarrow \mathcal{A}(a) \right)$$

(Westera 2017)

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$$\text{A-Quality}(\mathcal{A}) = \forall a \, (\mathcal{A}(a) \rightarrow \Diamond({}^{\vee} a \wedge \forall b \, ((\mathcal{Q}(b) \wedge b \subset a) \rightarrow \neg {}^{\vee} b)))$$

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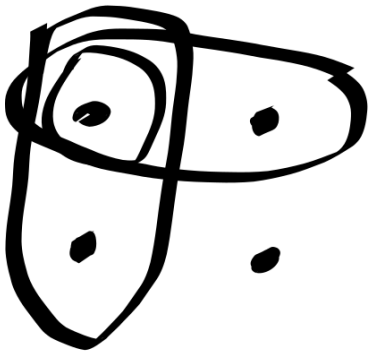
(Westera 2017)

Illustration: Exhaustivity (1/2)

QUD



pvq

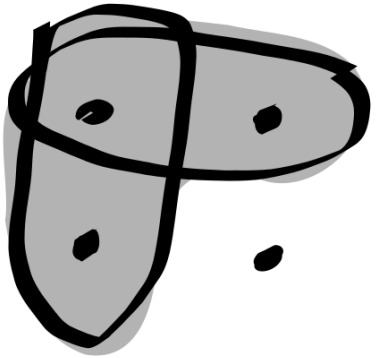
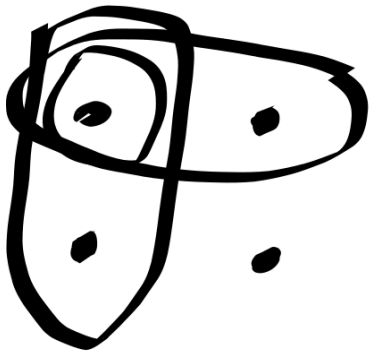
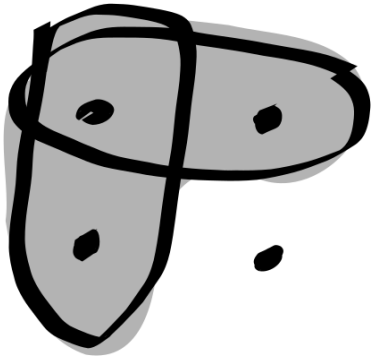


Illustration: Exhaustivity (1/2)

QUD



pvq



A-Quantity

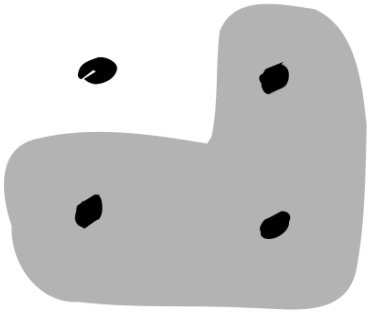
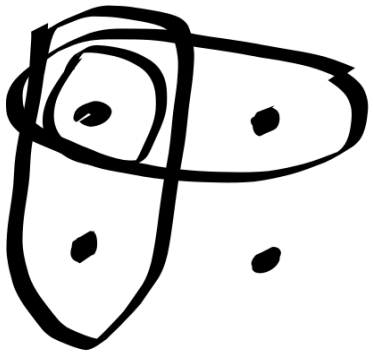


Illustration: Exhaustivity (1/2)

QUD



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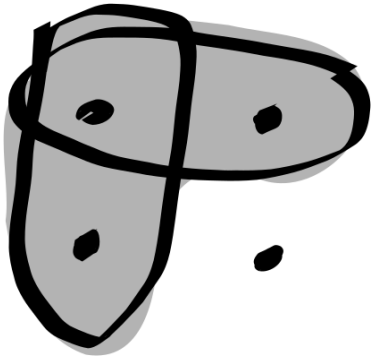

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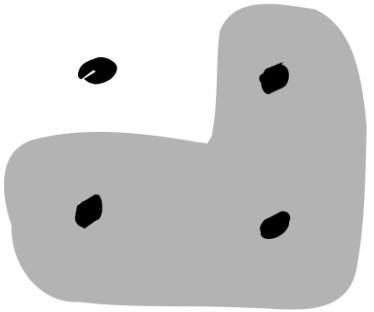
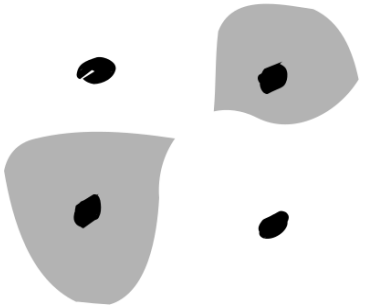


intersection



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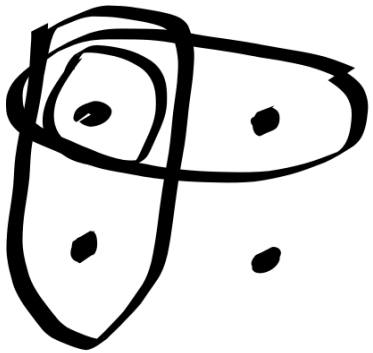
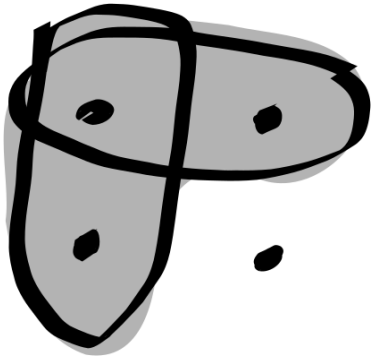


p∨q



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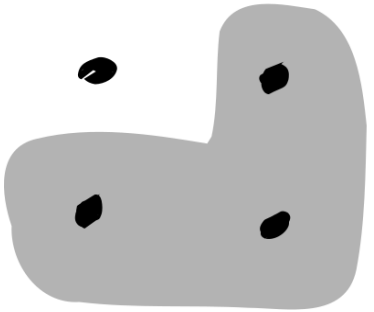

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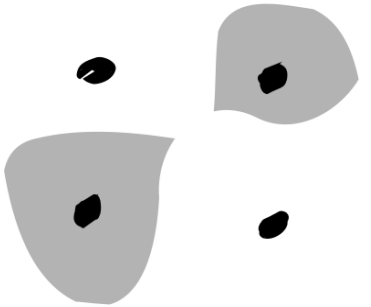
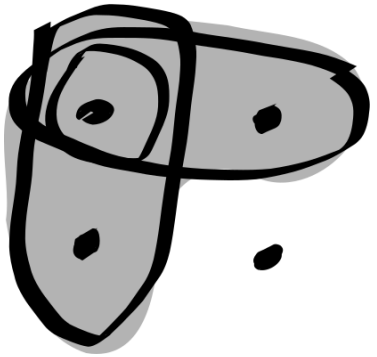


p∨q∨(p∧q)



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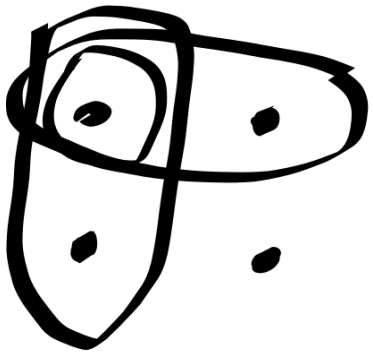

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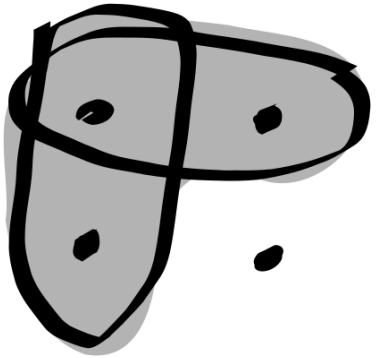

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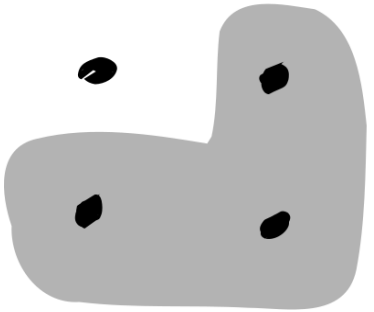

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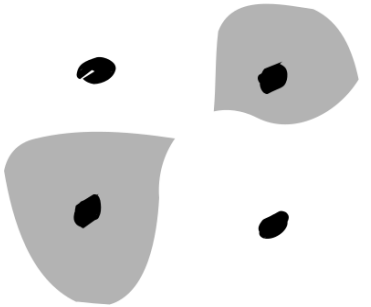

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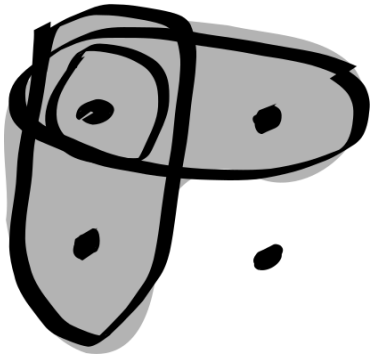

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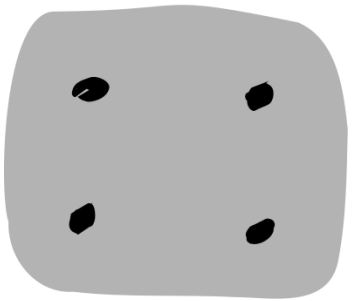

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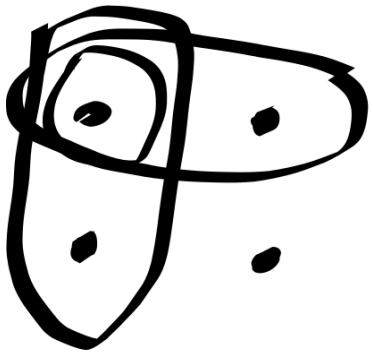

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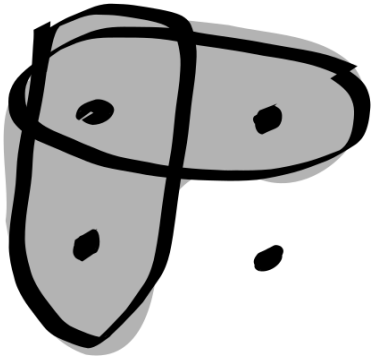

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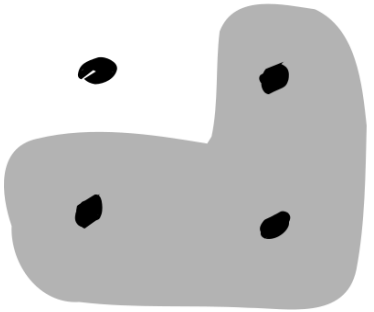

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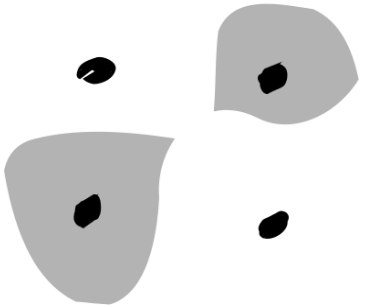

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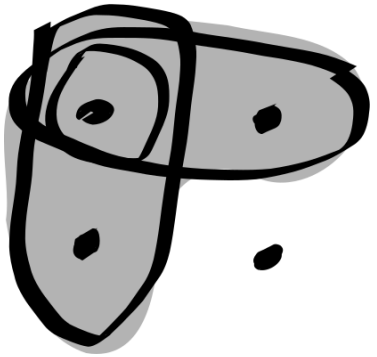

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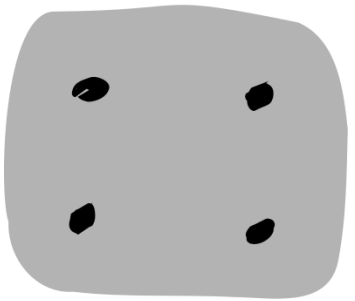


intersection

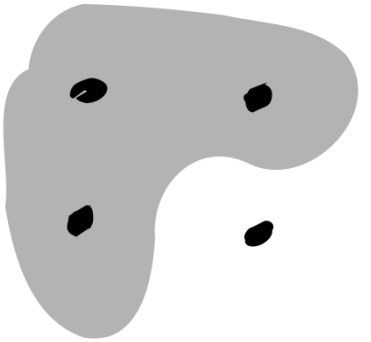
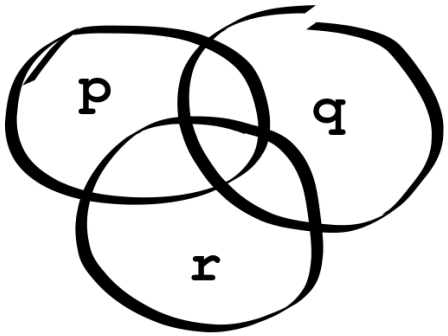
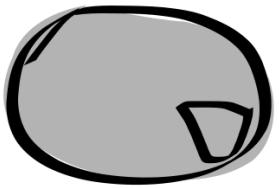


Illustration: Exhaustivity (2/2)

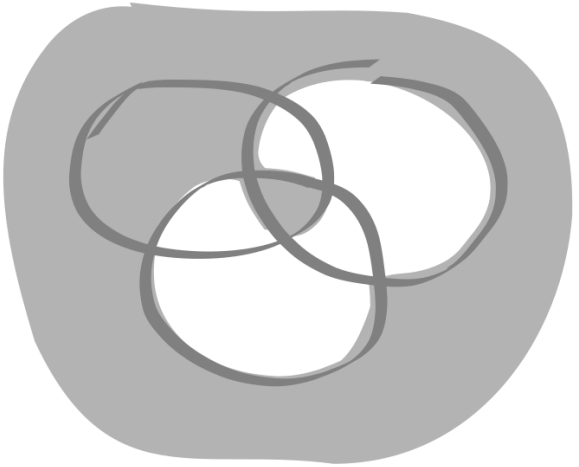
QUD



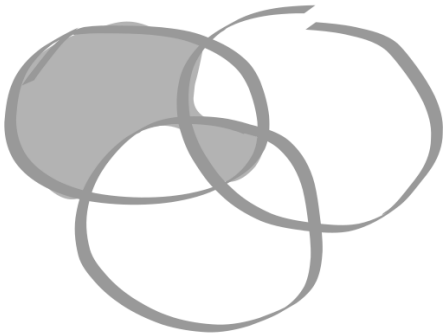
$p \vee (p \wedge q \wedge r)$



A-Quantity



intersection



Outline

1. Background & Motivation
2. Attentional pragmatics
3. **Deriving something like Alternative Semantics**

Example (1/6)

(3) John was at the party and Mary was there too.

- Attentional content:
  - **{..., Pj, Pm, Pj∧Pm}**

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Example (2/6)

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Example (2/6)

(4) John was at the party.

- Attentional content:
  - {..., **Pj**}
- Attentional intent:
  - {**Pj**}
  - No other possibilities

Example (3/6)

(5) John wasn't at the party.

- Attentional content:
  - {..., **¬Pj, Pj**}

cf. Krifka 2013

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  - ~~**{Pj, Pm, PjvPm}?**~~
- Prediction: Focus disambiguates...

Example (5/6)

(7) John was at the party, or both John and Mary

- Attentional content:
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- Attentional intent:
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  - **{Pj}**
  - **{Pj∧Pm}?**
  - **{Pj, Pm, Pj∧Pm}?**

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  - ~~**{Pj∧Pm}?**~~
  - ~~**{Pj, Pm, Pj∧Pm}?**~~

General result (1/2)

- For any utterance that complies with the maxims wrt a QUD closed under intersection:

informational intent =

U(attentional intent)

Example (6/6)

(8) It is not the case that John was there and Mary was there.

- Attentional content:
  - **{..., Pj, Pm, Pj∧Pm, ¬Pj∧Pm}**

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  - ~~**{¬Pj, ¬Pm}**~~**?**

General result (2/2)

- For an utterance in disjunctive normal form, wrt a QUD containing its literals, closed under intersection and union:

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attentional intent =

the set of all disjuncts

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Discussion (1/2)

- Something like Alternative Semantics can be derived from a pragmatics of attention *plus a classical semantics*.

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- Sensitivity to prosodic focus.

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- Something like Alternative Semantics can be derived from a pragmatics of attention *plus a classical semantics*.
- Sensitivity to prosodic focus.
- Some more difficult cases have been left out (but see Westera 2017):
  - Cases that violate a maxim;
  - Conjunctions of disjunctions;
  - Quantifiers;
  - Interrogatives.

Discussion (2/2)

- By drawing attention to possible answers to a QUD (without asserting them), an ‘issue’ is raised.

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- By drawing attention to possible answers to a QUD (without asserting them), an ‘issue’ is raised.
  - To find its *minimal* resolving answers, downward-close it.
  - (To find its exhaustive answers, turn it into a partition.)
- Natural language constructions may be sensitive to any of these aspects.

Acknowledgment

Enabled by funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No 715154).

And in an earlier stage from the NWO project 'the Inquisitive Turn'.

A more difficult case

(9) John or Mary was there,
and Bill or Sue.

- Attentional intent:
  - Option A: **{Pj∧Pb, Pj∧Ps, Pm∧Pb, Pm∧Ps}?**
  - Option B: **{Pj, Pm}** & **{Pb, Ps}**