Loose Talk, Pragmatic Slack and a Little Bit of Metaphor

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[This handout is meant for reference only: don't try to read along, look at the slides instead!]

Loose Talk Examples

1. Camilla arrived at 6 o'clock
2. Rob is six foot one
3. The library lent out a million books this year
4. The molar mass of water is 18.015 grams

Motivation for a pragmatic treatment:

5a. The number did not exceed 980.000, but the library lent out around a million books this year

#5b. The number did not exceed 980.000, but the library lent out a million books this year

Rounder numbers, looser talk:

6a. The earth is five billion years old

6b. The earth is four point five billion years old

7a. This parrot is 22 inches tall

7a. This parrot is 55.88 cm tall

Embeddings:

9. Camilla didn't arrive at 6 o'clock
10. Everyone who arrived at six o'clock got a free lunch
11. At most three people in this room are six foot one
12. If Riga is 800 miles from Vienna, the trip will take as long as going from New York to Chicago

Strict comparatives:

13. There are more than two hundred people at the party
14. A: There are two hundred people at the party

    B_1: Actually, there are more than two hundred

    #B_2: Actually, there are at least two hundred and two

15. There are exactly [roughly] twenty thousand people at the rally

#16. There were roughly 23.672 people in the stadium

17. France is hexagonal.
18. The fridge is empty.
19. Nathalie is wearing the same sort of hat that Sherlock Holmes always wears.
20. Crotone is in the arch of the Italian boot.

Definitions

A ***proposition*** or ***full proposition*** is a set of possible worlds or a subset of logical Ω. The proposition p is true at all worlds in p and false at all other worlds. It's *negation* $\neg p$ is the complement $\Omega \backslash p$.

A ***partial proposition*** is an ordered pair $\langle t, f \rangle$ of disjoint sets of worlds. The partial proposition $\langle t, f\rangle$ is true at w just in case $w \in t$ and false at w just in case $w \in f$, and its truth-value is undefined at worlds outside $t \cup f$. (The full proposition p and the partial proposition $\langle p, \neg p\rangle$ are identified).

Where p and q are propositions, the ***restriction*** of p to q is the partial proposition $p{\restriction}q := \langle p \cap q,\ \neg p \cap q\rangle$.

A ***question*** or ***subject matter*** is a partition of Ω. Two worlds w and v agree about S, written $w \sim_S v$, just in case w and v are contained in the same partition cell of S. (Thus $\sim_S$ is an equivalence relation on Ω).

A proposition p is ***wholly about*** (or simply ***about***) S just in case p is a union of S-cells. (Equivalently, p is about S iff p is closed under the relation $\sim_S$). A partial proposition is about S just in case it is a restriction of some full proposition about S.

A proposition p has ***no bearing on*** S just in case $\top$ is the only proposition about S that p entails.

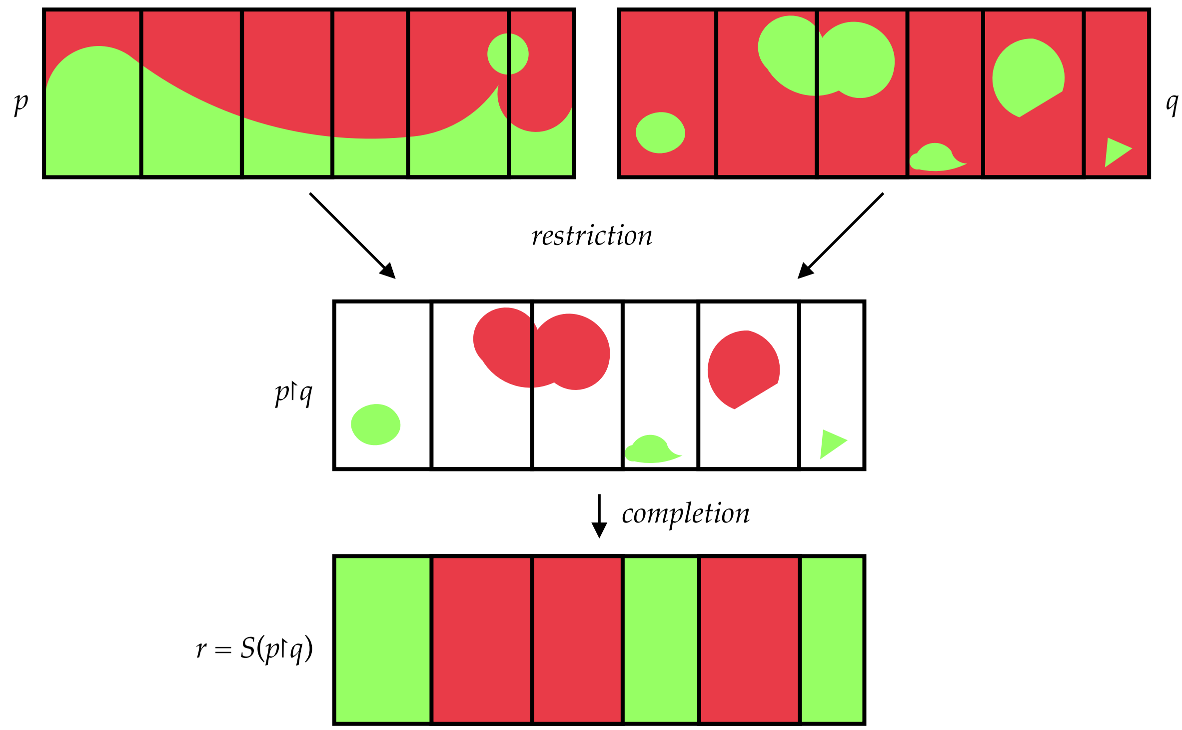
Let $\langle t, f \rangle$ be a partial proposition and S be a subject matter such that $\langle t, f \rangle$ is about S. Then the ***completion*** of $\langle t, f\rangle$ by S, written $S(\langle t, f\rangle)$, is the following (partial) proposition:

$$S(\langle t, f\rangle) =_{\text{df}} \langle \{w : w \sim_S v \text{ for some } v \in t\}, \{w : w \sim_S v \text{ for some } v \in f\}\rangle$$

Conversational Exculpature

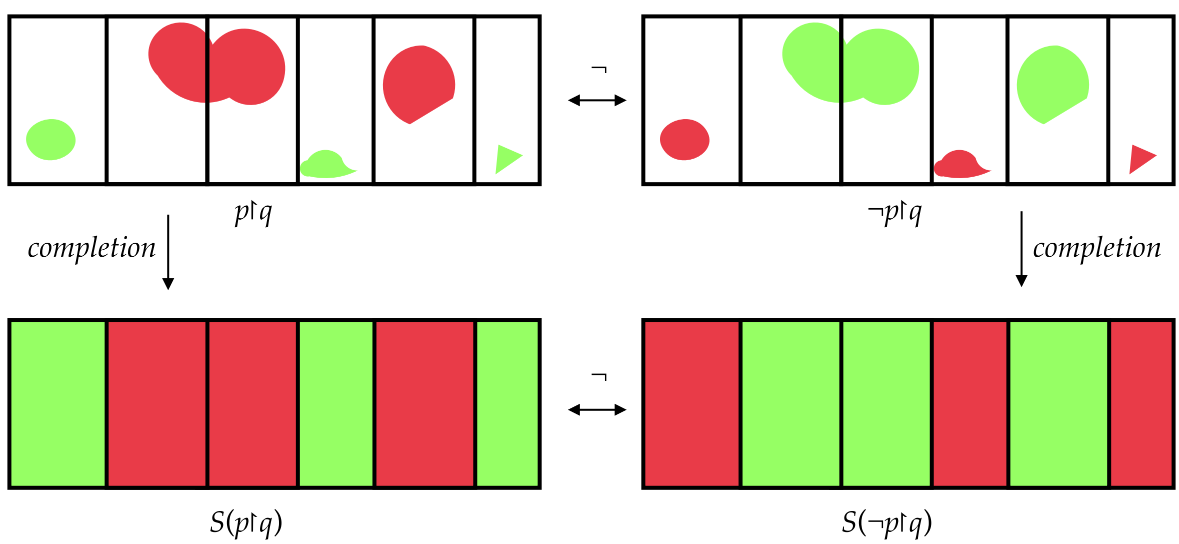
Conversational exculpature is a pragmatic transformation taking the literal, irrelevant content p of a proposition to the intended, relevant message r. This intended message is computed on the basis of p, and two contextual clues: a contextual presupposition q and the question under discussion S. First we take the restriction of p by q; provided the resulting partial proposition is about S, we can then use S to complete it to the proposition $S(p{\restriction}q)$.

Suppose in a conversation with the question S as its QUD, the speaker makes an assertion with p as its literal content, while contextually presupposing q. Then whenever the proposition $S(p{\restriction}q)$ is well-defined, it is available as a non-literal reading of the speaker's claim.



Each large rectangle represents a different (partial) proposition. Regions where the depicted proposition is true are shaded light grey, regions where it is false are dark grey. The superimposed thick black lines represent the question under discussion S. The diagram above represents the two–stage process of restriction and completion by which the communicated content $S(p{\upharpoonright}q)$ is computed.

The diagram below provides a visual illustration of the duality of the completion operator, explaining why $S(\neg p{\upharpoonright}q) = \neg S(p{\upharpoonright}q)$.



Formal Results

Conditions for Exculpature. Let p, r and q be full propositions, and let S be a subject matter. Then we have $r = S(p{\upharpoonleft}q)$ if and only if the following three conditions are met:

- r is about S. (*Aboutness*)
- $p{\upharpoonleft}q = r{\upharpoonleft}q$. (*Equivalence*)
- q has no bearing on S. (*Independence*)

In case only the final condition fails, $S(p{\upharpoonleft}q) = r{\upharpoonleft}s$, where s is the strongest proposition q entails about S.

Boolean Transparency. Fixing a particular presupposition q and subject matter S, let '$\circlearrowleft$' abbreviate the loosening operator $p \mapsto S(p {\upharpoonleft}q)$ that takes literal readings to loose ones. Then '$\circlearrowleft$' is transparent to Boolean operators:

A. $\neg{\circlearrowleft}p \;=\; {\circlearrowleft}\neg p$

B. $\bigwedge_{i \in I} {\circlearrowleft}p_i \;=\; {\circlearrowleft}\bigwedge_{i \in I} p_i$

C. $\bigvee_{i \in I} {\circlearrowleft}p_i \;=\; {\circlearrowleft}\bigvee_{i \in I} p_i$

for any propositions p and p_i such that ${\circlearrowleft}p$ and ${\circlearrowleft}p_i$ are well-defined.

Entailment Transparency. The loosening operator '$\circlearrowleft$' also preserves entailment. If $p_1, p_2 \ldots p_n \vDash c$, then ${\circlearrowleft}p_1, {\circlearrowleft}p_2 \ldots {\circlearrowleft}p_n \vDash {\circlearrowleft}c$ (provided only that ${\circlearrowleft}p_i$ *and* ${\circlearrowleft}c$ are well-defined).

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