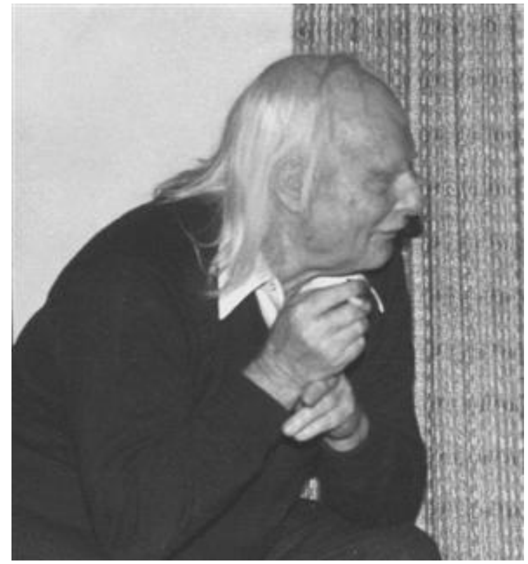
Loose Talk, Pragmatic Slack, and a Little Bit of Metaphor

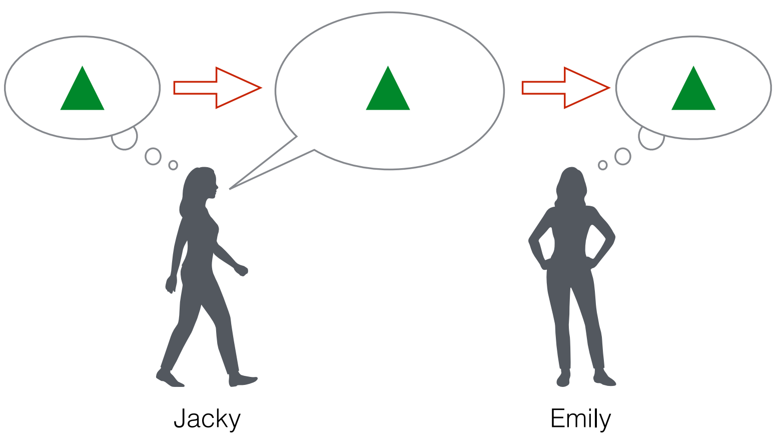
dhoek@princeton.edu
VTLx
8 November 2019

1



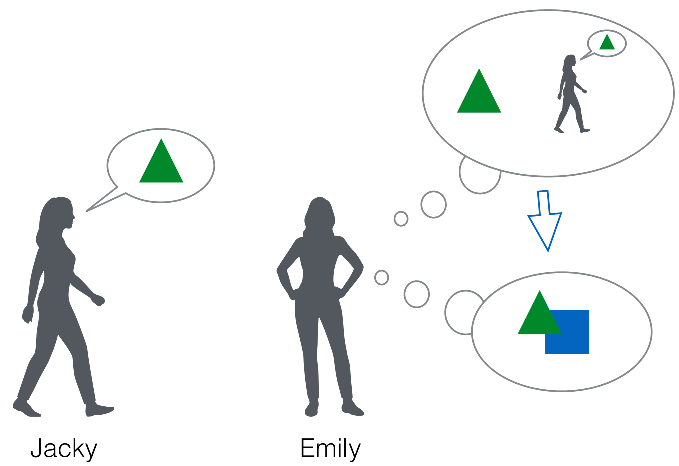
2

Pre-Gricean Picture of Linguistic Communication



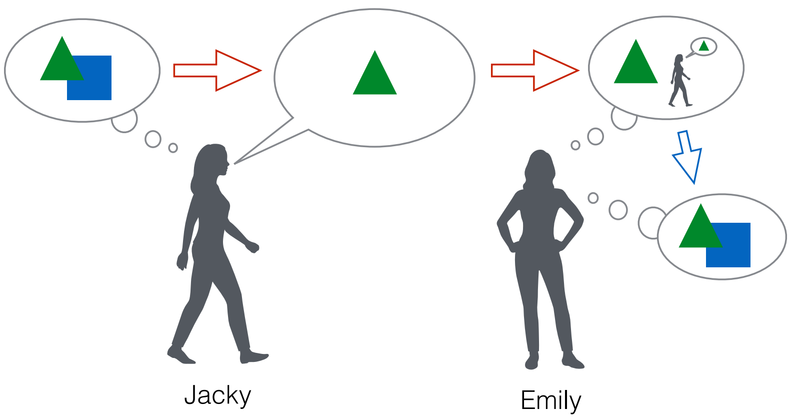
3

Grice's Insight



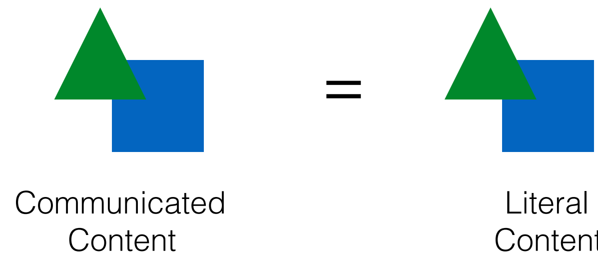
4

Grice's Insight



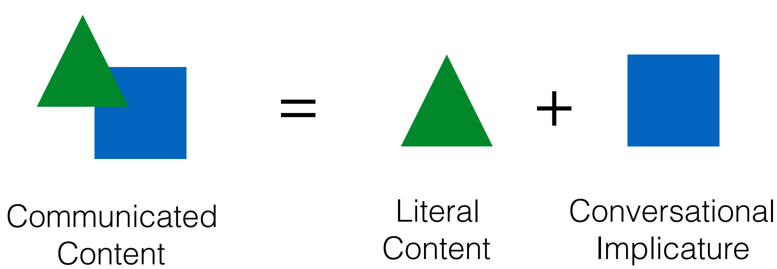
5

Old Picture



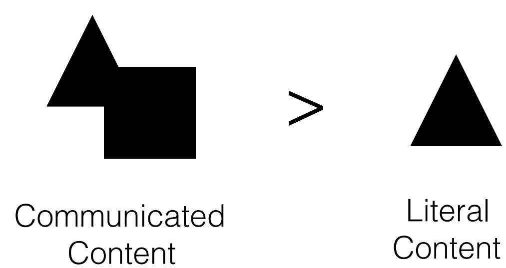
6

Conversational Implicature



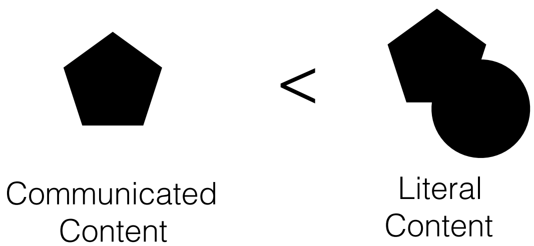
7

Conversational Implicature



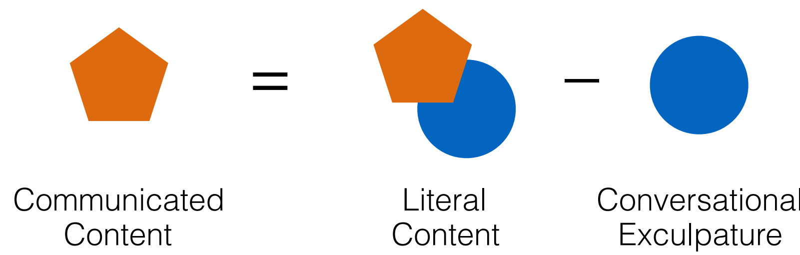
8

Loose Talk



9

Hypothesis



10

Loose Talk

The use of precise measurements where only an approximate quantity is intended:

- “Camilla arrived at 6 o’clock”
- “Rob is six foot one”
- “The library lent out a million books this year”
- “The molar mass of water is 18.015 grams.”

11

Round numbers make for looser talk (Krifka)

- The amount of ‘give’ varies with the measurement expression
  - “The earth is five billion years old” has a reading *the earth is between 4.5 and 5.5 billion years old.*
  - “The earth is four point five billion years old” has no reading *the earth is between 4 and 5 billion years old.*
  - “This parrot is 22 inches tall” has a reading *this parrot is between 21.5 and 22.5 inches tall*
  - “This parrot is 55.88 cm tall” has no reading *this parrot is between 54.61 and 57.15 cm tall*

12

The Negation Problem (Carter)

The negations of weakened loose talk statements undergo strengthening.

- "Camilla didn't arrive at 6 o'clock"
- "Rob isn't six foot one"
- "There weren't two dozen people at the party"
- "The molar mass of water isn't 18.015 grams."

Other embeddings

- "Everyone who arrived at six o'clock got a free lunch."
- "At most three people in this room are six foot one."
- "If Riga is 800 miles from Vienna, the trip will take as long as going from New York to Chicago."

Strict Comparatives

- There are more than two hundred people at the party.
- 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.

Scales (Krifka)

- We always choose the measurement expressions we use from a particular *scale*. Scales are examples of *expression choice spaces*.
- In English speaking countries, personal height tends to be specified using the feet-and-inches scale:
  - {…, "5 foot 10", "5 foot 11", "6 feet", "6 foot 1", …}
- {…, "80 cm", "90 cm", "1m", "1.1m", "1.2m", …}
- {…, "five to ten", "ten o'clock", "five past ten", "ten past ten" …}

Coarse and fine scales

- {… 400 miles, 500 miles, 600 miles, 700 miles …}
- {… 450 miles, 500 miles, 550 miles, 600 miles, …}
- {… 490 miles, 500 miles, 510 miles, 520 miles, …}
- {… 499 miles, 500 miles, 501 miles, 502 miles, …}
- {… 499.99 miles, 500.00 miles, 500.01 miles, …}

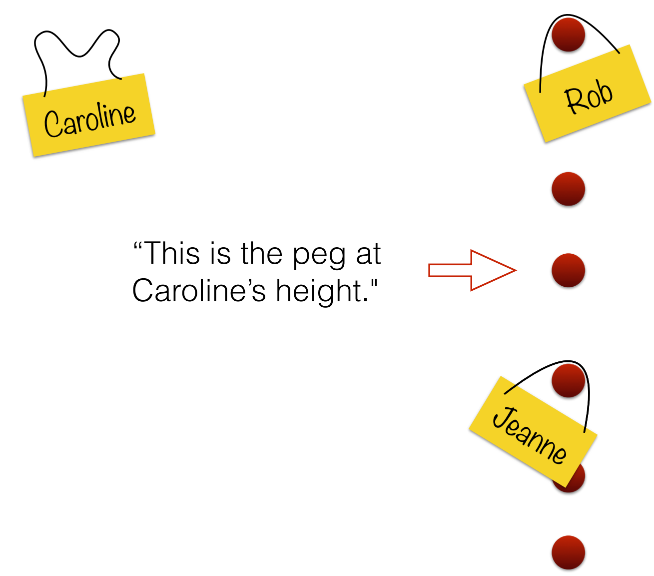
Scales are connected to questions (QUDs)

- Loose talk arises in large part because we only care about quantities to a certain level of precision. (No-one wants to know how many millimetres Amsterdam is from Vienna)
- One can represent the level of precision we care about using the QUD, with coarser QUDs representing more relaxed attitudes.
- Coarser scales address coarser questions

Scales carry presuppositions

{…,“5 foot 10”, “5 foot 11”, “6 feet”, “6 foot 1”, …}

- There are many intermediate heights not represented on this scale, so in using this scale, one ignores those possibilities.
- Restricting oneself to the expressions on this list, one is effectively presupposing people are some exact number of inches tall.
- Coarser scales carry stronger presuppositions



‘Rob is six foot one’

‘Rob is six foot one to the nearest inch’

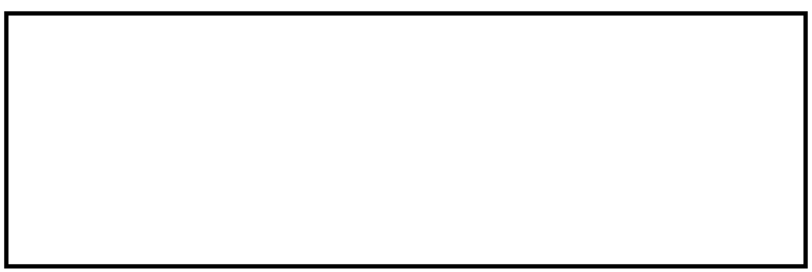
. . .

Logical Space (Ω)

Ω is the set of all possible worlds

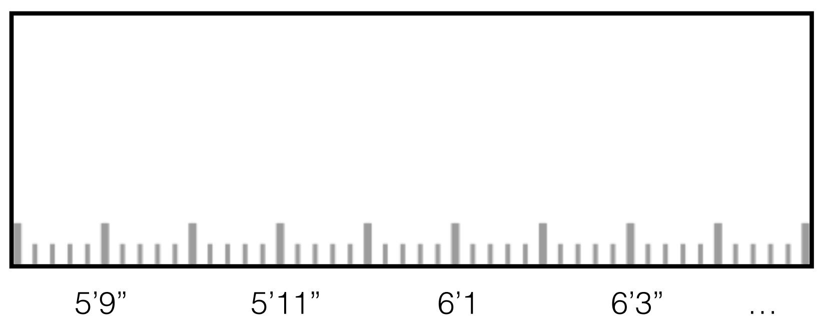
Logical Space (Ω)

Ω is the set of all possible worlds



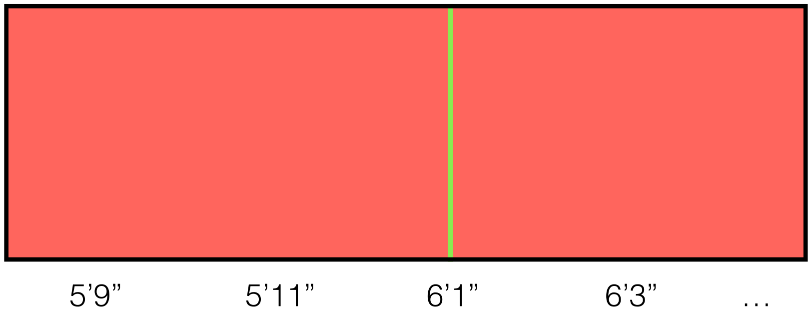
Logical Space (Ω)

Ω is the set of all possible worlds



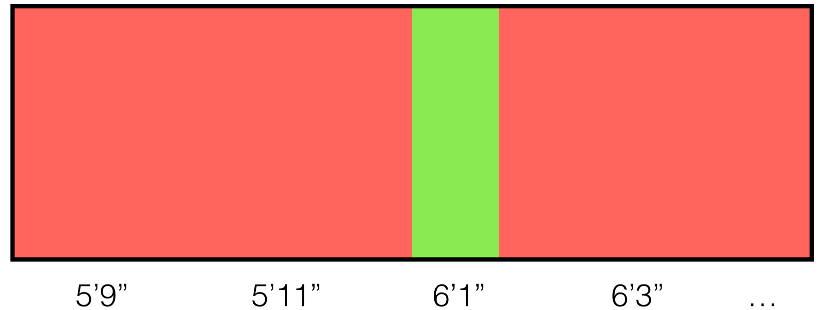
‘Rob is six foot one’

Def.: A *proposition* is (represented by) a set of possible worlds. A proposition is true at all and only those worlds that are its members, and false everywhere else.

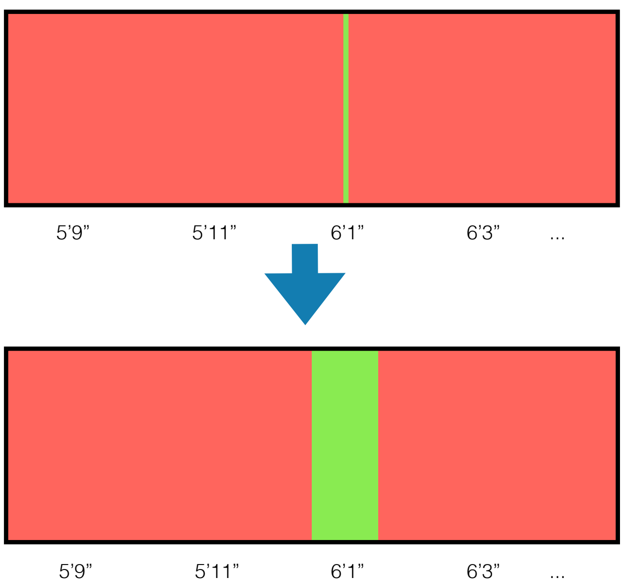


25

‘Rob is six foot one to the nearest inch’



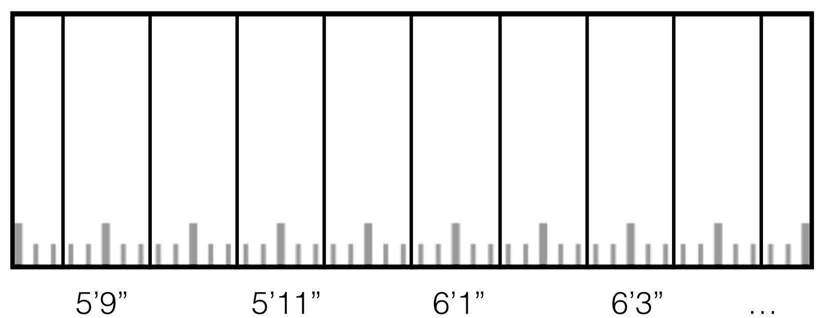
26



27

‘How tall is Rob to the nearest inch?’

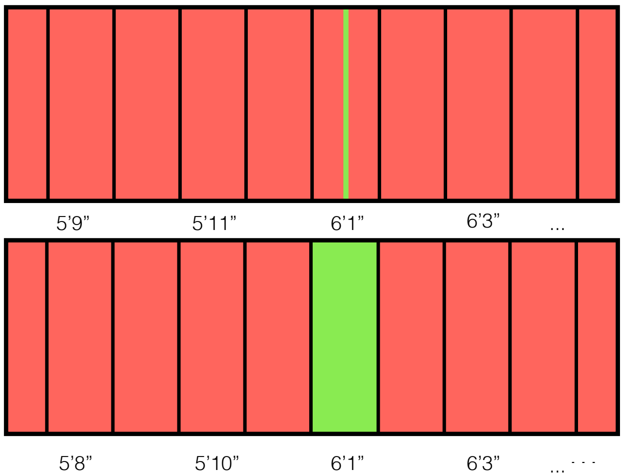
Def.: A *question* or *subject matter* is a partition of Ω. That is, it is a set of non-empty, disjoint sets of possible worlds, whose union is Ω.



28

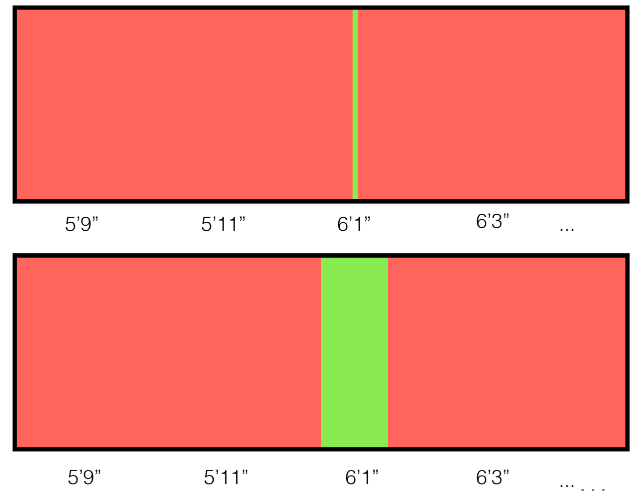
Relevance

Def.: A proposition p is (*wholly*) *about* a subject matter S if and only if $p = \bigcup X$ for some set of cells $X \subseteq S$.



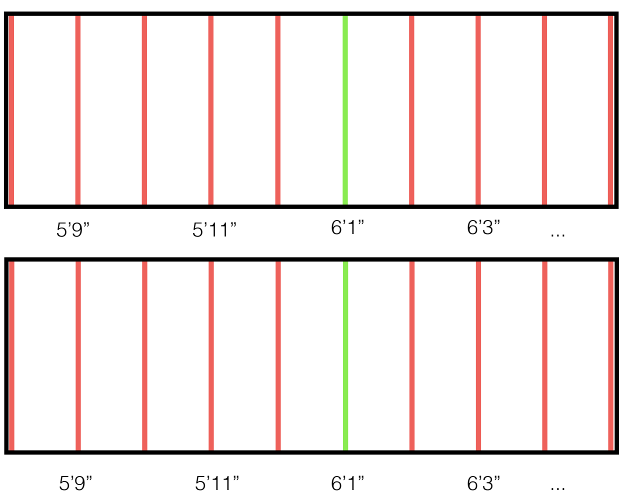
29

Scale presupposition



30

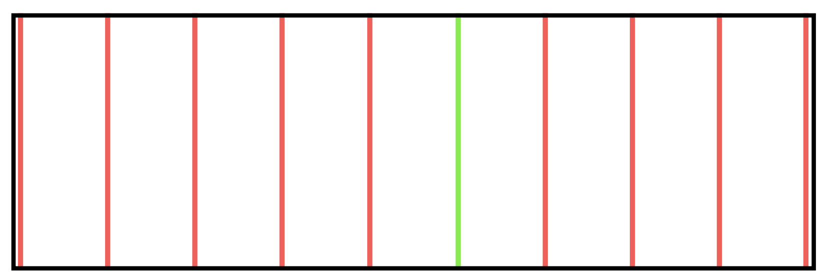
Scale presupposition



31

A partial proposition

A *partial proposition* is (represented by) an ordered pair $\langle t, f \rangle$ where t and f are disjoint sets of worlds. $\langle t, f \rangle$ is true at w iff $w \in t$, and false at w iff $w \in f$. The truth value of $\langle t, f \rangle$ is undefined outside $t \cup f$.

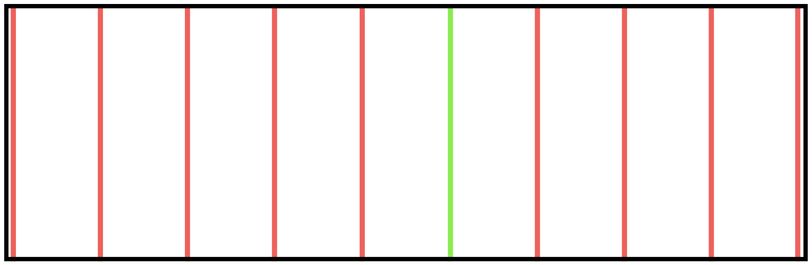


The pair $\langle a, \neg a \rangle$ represents a full proposition, viz. the same full proposition as the set a.

32

‘Rob is six foot one’ $\upharpoonright$ ‘Rob is an exact number of inches tall’

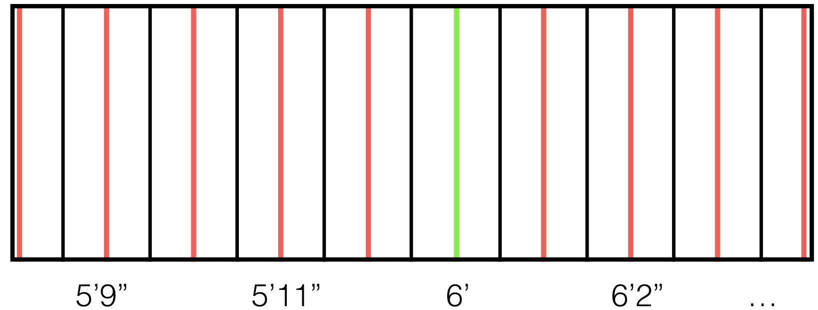
Def. the *restriction of p to q*, written $p{\upharpoonright}q$, is the partial proposition $\langle p \cap q, \neg p \cap q \rangle$ (here $\neg p = \Omega \backslash p$)



33

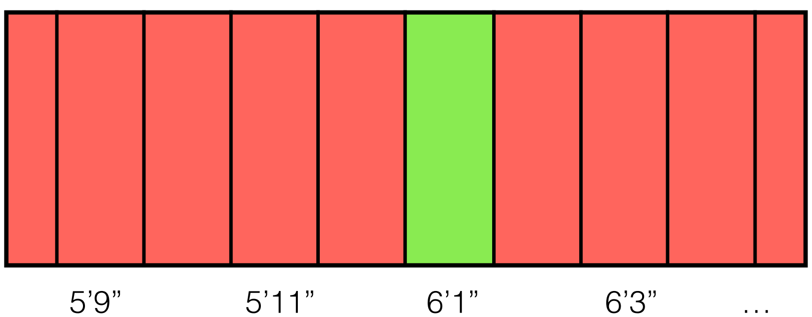
‘Rob is six foot one’ $\upharpoonright$ ‘Rob is an exact number of inches tall’

Def. The partial proposition $\langle t, f \rangle$ is (*wholly*) *about* the question S if and only if $\langle t, f \rangle = r{\upharpoonright}b$ for some full proposition r about S.



34

‘Rob is six foot one to the nearest inch’

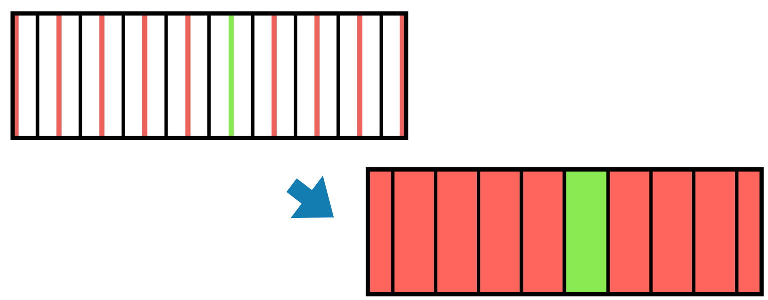


35

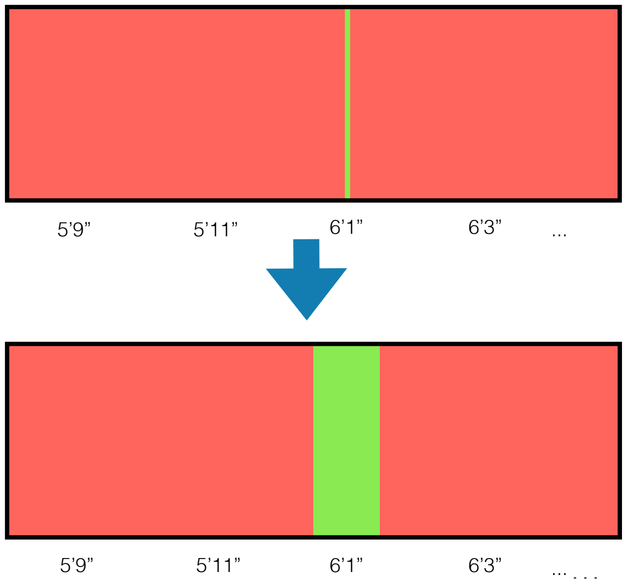
Completion

Def. Suppose $\langle t, f \rangle$ is a partial proposition about S. Then the *completion of* $\langle t, f \rangle$ *by S*, written $S(\langle t, f \rangle)$, is the following (partial) proposition:

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

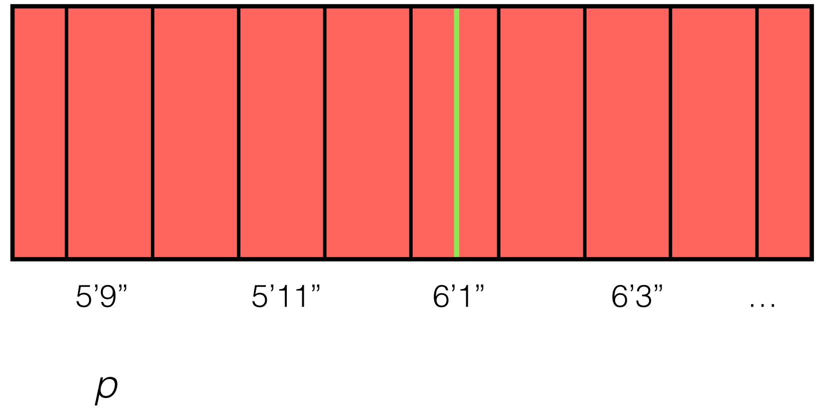


36



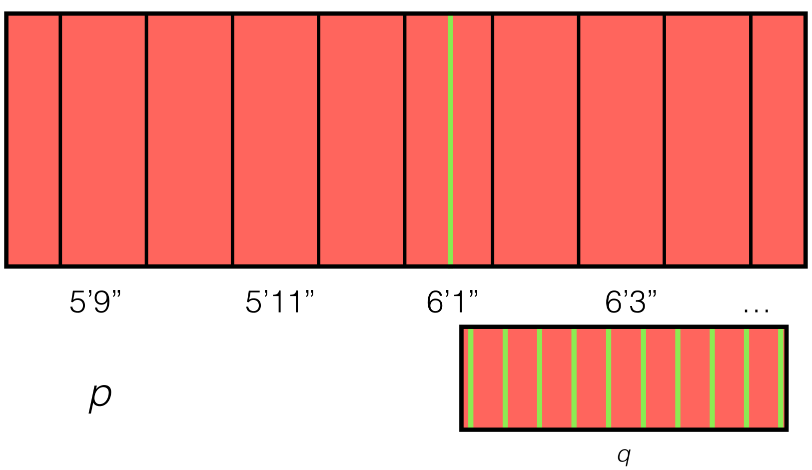
37

We start with the semantically expressed proposition *p*



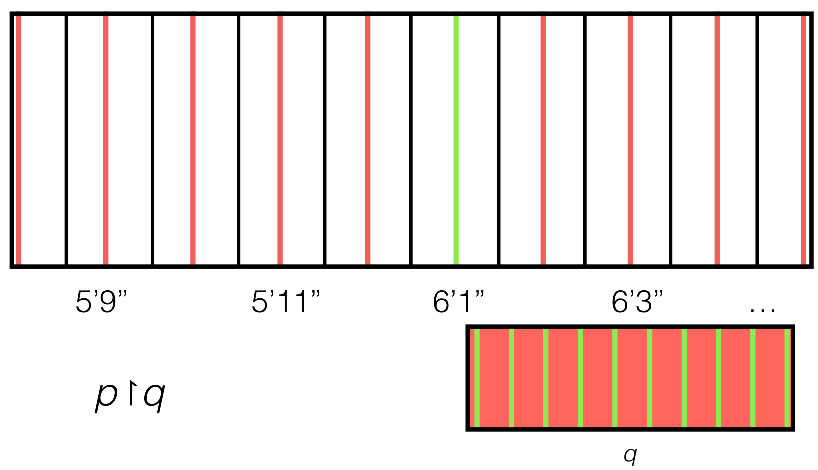
38

I. Restrict *p* to a suitable contextual presupposition *q*



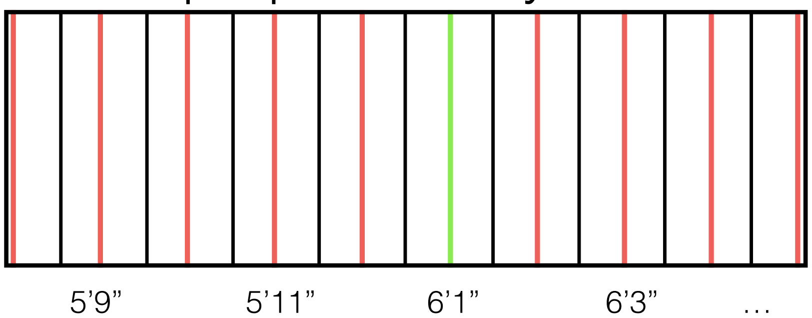
39

I. Restrict *p* to a suitable contextual presupposition *q*



40

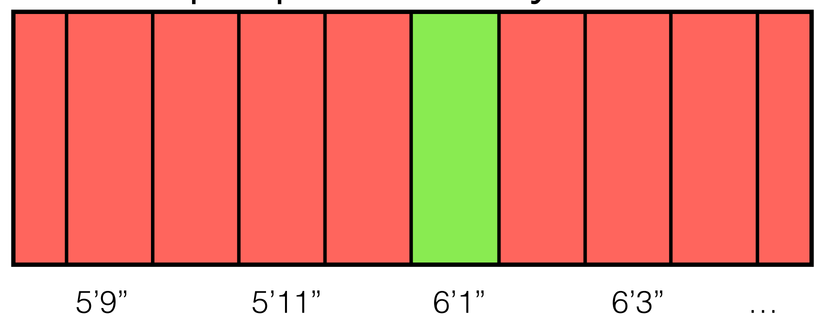
II. Complete the resulting proposition by *S*



$p \upharpoonright q$

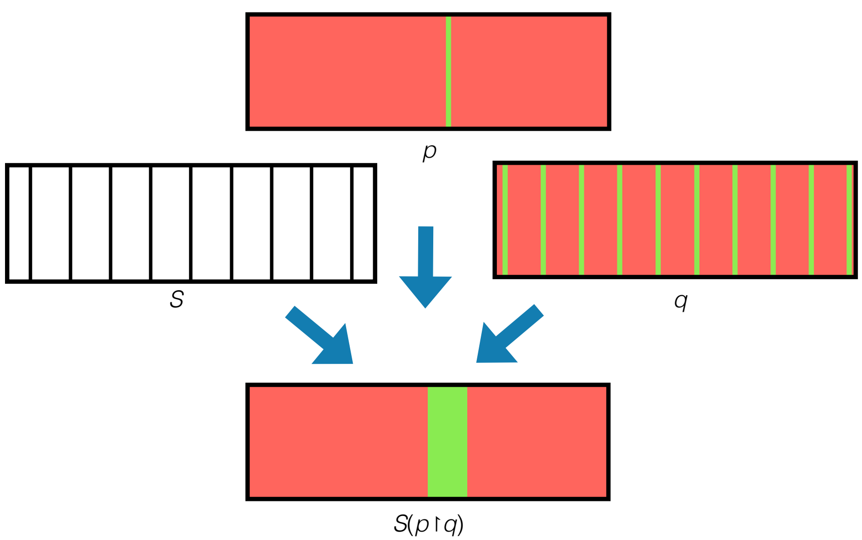
41

II. Complete the resulting proposition by *S*



$S(p \upharpoonright q)$

42



43

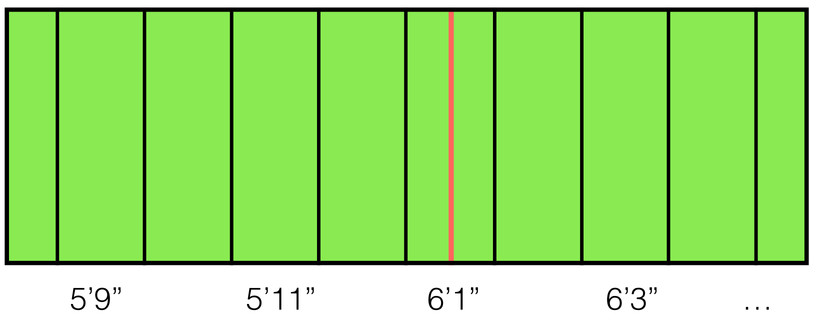
$$r = S(p \upharpoonright q)$$

p: Rob is six feet tall	(literal content)
q: Rob is an exact number of inches tall	(supposition)
S: Rob's height to the nearest inch	(QUD)
r: Rob is six feet tall to the nearest inch	(literal content)

Conversational Exculpature: 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*. Whenever the proposition $S(p \upharpoonright q)$ is well-defined, it is available as a non-literal reading of the speaker's claim.

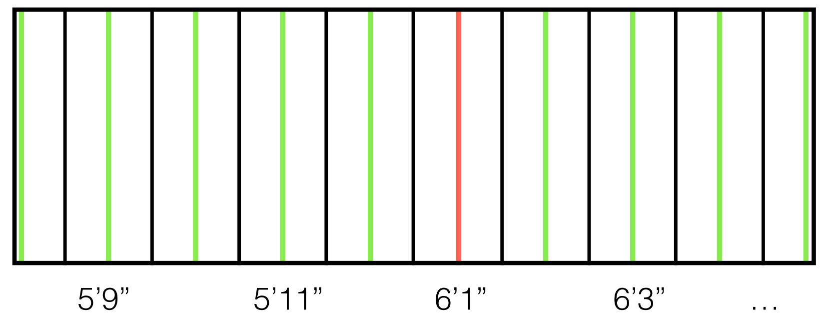
44

Negation: ‘Rob isn’t six foot one’



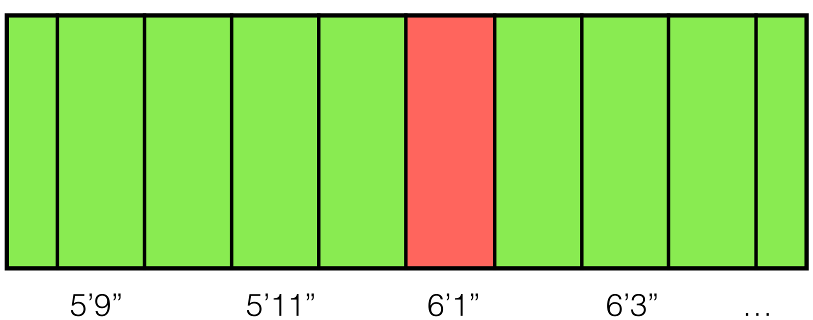
45

‘Rob isn’t six foot one’ ↾ ‘Rob is an exact number of inches tall’



46

‘It is not the case that Rob is six foot one to the nearest inch’



47

$$S(\neg p \upharpoonright q) = \neg S(p \upharpoonright q)$$

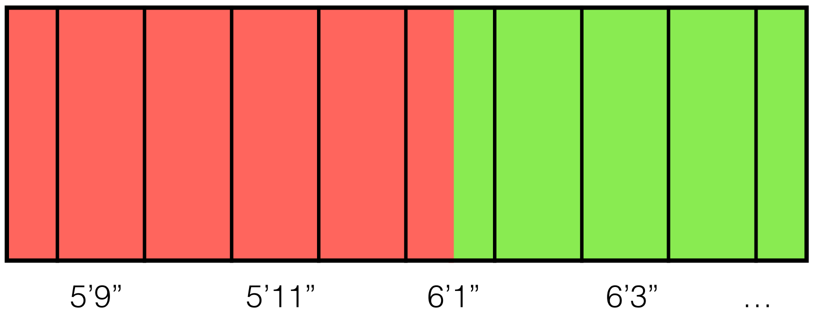
Transparency to Boolean operators:

Let ‘$\circlearrowleft$’ abbreviate the operator $p \mapsto S(p \upharpoonright q)$. Then for any propositions p and p_i such that $\circlearrowleft p$ and $\circlearrowleft p_i$ are well-defined:

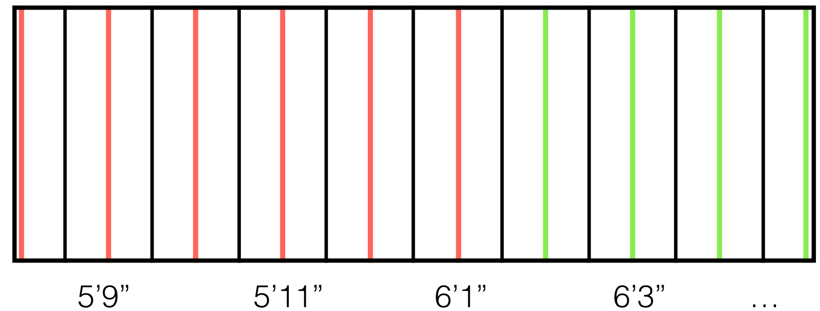
1. $\neg \circlearrowleft p \;=\; \circlearrowleft \neg p$
2. $\bigwedge_{i \in I} \circlearrowleft p_i \;=\; \circlearrowleft \bigwedge_{i \in I} p_i$
3. $\bigvee_{i \in I} \circlearrowleft p_i \;=\; \circlearrowleft \bigvee_{i \in I} p_i$

48

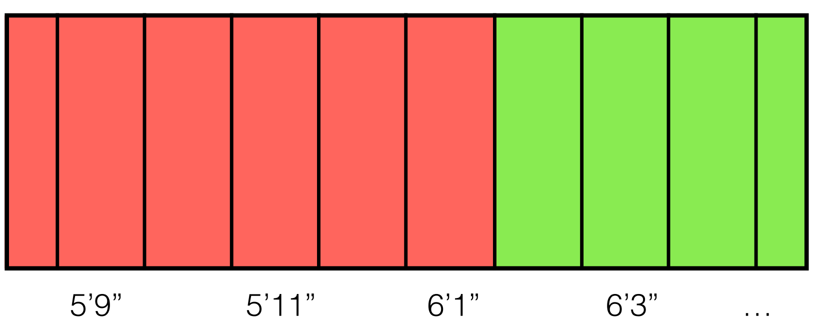
Strict comparatives
‘Rob is over six foot one’



‘Rob is over six foot one’ ↾ ‘Rob is an exact number of inches tall’



‘Rob is closer to six foot two than to six foot one.’



Rounder numbers, looser talk

- Coarse scales are made up out of round numbers
- As noted before, coarser scales carry stronger contextual presuppositions and are used for more coarse grained questions
- The account predicts the effect of exculpating strong suppositions with coarse questions is greater than the effect of exculpating weak ones with fine questions
- This explains why round numbers make for greater weakening/strengthening

Scale Ambiguity

- {… 400 miles, **500 miles**, 600 miles, 700 miles …}
- {… 450 miles, **500 miles**, 550 miles, 600 miles, …}
- {… 490 miles, **500 miles**, 510 miles, 520 miles, …}
- {… 499 miles, **500 miles**, 501 miles, 502 miles, …}
- {… 499.99 miles, 500.00 miles, 500.01 miles, …}

Scale Ambiguity

- Because round numbers occur on fine as well as on coarse scales, the use of a round number doesn't unambiguously indicate the use of a coarse scale
- Words like "exactly" mark the use of a fine scale, while "roughly" indicates a coarse scale. This correctly predicts a strong [weak] reading for "There are exactly [roughly] twenty thousand people at the rally."
- This also explains why "There were roughly 23.672 people in the stadium" is infelicitous: "roughly" indicates a coarse scale, but the expression "23.672" occurs only on a maximally fine scale.

Conclusions

- The present account of loose talk provides the correct prediction about downward entailing environments
- It accounts for why round numbers make for looser talk
- It explains the role of slack regulators as scale disambiguators
- It achieves this by appeal an independently motivated pragmatic mechanism of exculpature

Exculpature and Metaphor

'Crotone lies in the arch of the Italian Boot'

57

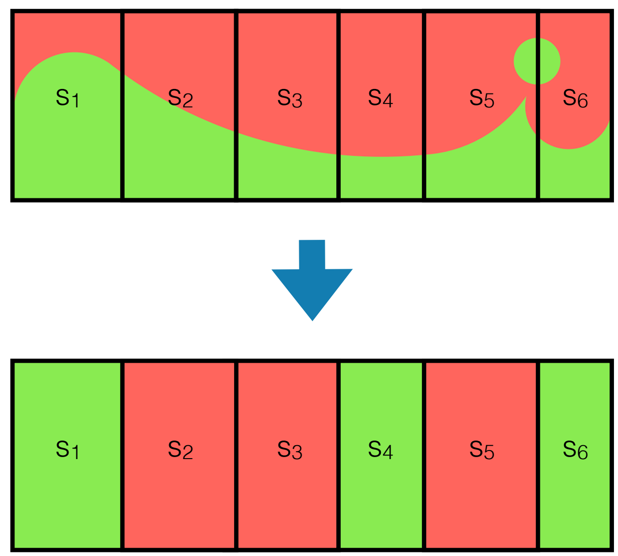
58

Exculpature and Metaphor

‘Crotone lies in the arch of the Italian Boot’

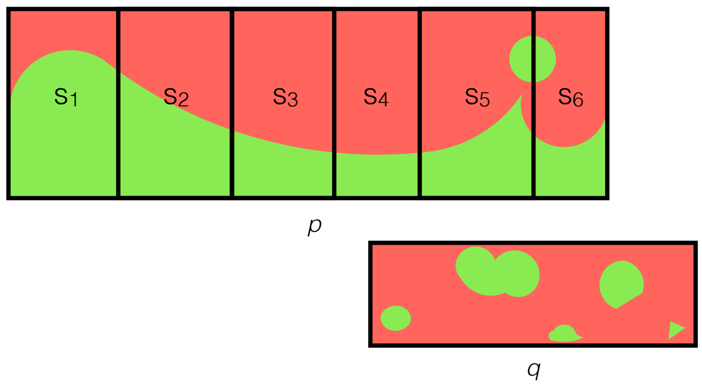
‘Crotone is in Southern Calabria’

59

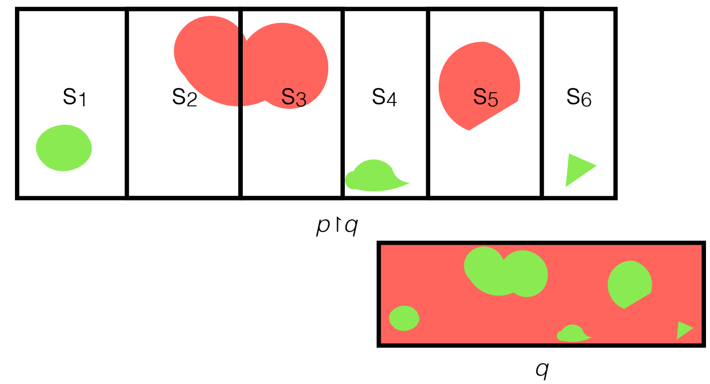


60

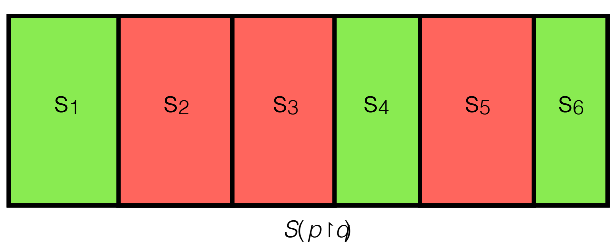
I. Restrict p to a suitable contextual presupposition q

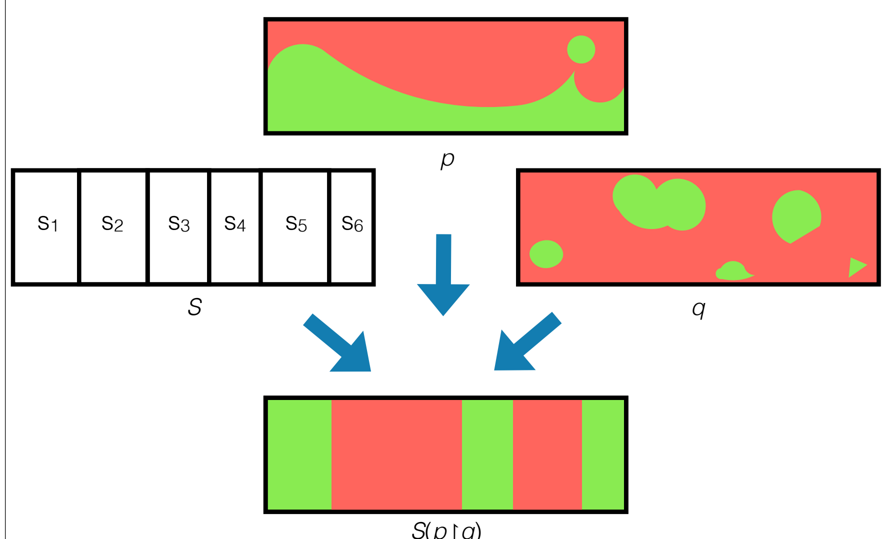


I. Restrict p to a suitable contextual presupposition q



II. Complete the resulting proposition by S





A Useful Result

Let p, r and q be full propositions, and let S be a subject matter. Then we have $r = S(p \upharpoonright q)$ if and only if the following three conditions obtain:

- **Aboutness:** r is about S
- **Equivalence:** $p \upharpoonright q = r \upharpoonright q$
- **Independence:** q has no bearing on S

In case only this final condition fails, we have $S(p \upharpoonright q) = r \upharpoonright s$, where s is the strongest proposition about S entailed by q.