

# MODELING MANIPULATIVE LANGUAGE USE

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## GRICEAN PRAGMATIC THEORY AND ARGUMENTATIVITY IN LANGUAGE USE

- (1) A: How did your students do in the exam?  
B: Some of them passed.
- (2) Some people loved your poem.
- (3) Some people hated your poem.

- (4) A: How did your students do in the exam?  
B: Most of them got some of the questions right.
- vs.**
- B: Some of them got some of the questions right.

Lisanne	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗
Alex	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗
Pablo	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗
Theresa	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Johann	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

## MODELING MANIPULATIVE LANGUAGE USE

### STANDARD RSA

$$\text{Util}(s, u) = \log(P_{LL}(s | u)) - \text{cost}(u)$$

$$P_S(u | s) \propto \exp(\alpha * \text{Util}(s, u))$$

$$\text{Util}(s, u) = \underbrace{\log([s \in [[u]])]}_{\text{truth}} + \underbrace{\log(|[[u]]|^{-1})}_{\text{informativity}} - \underbrace{\text{cost}(u)}_{\text{cost}}$$

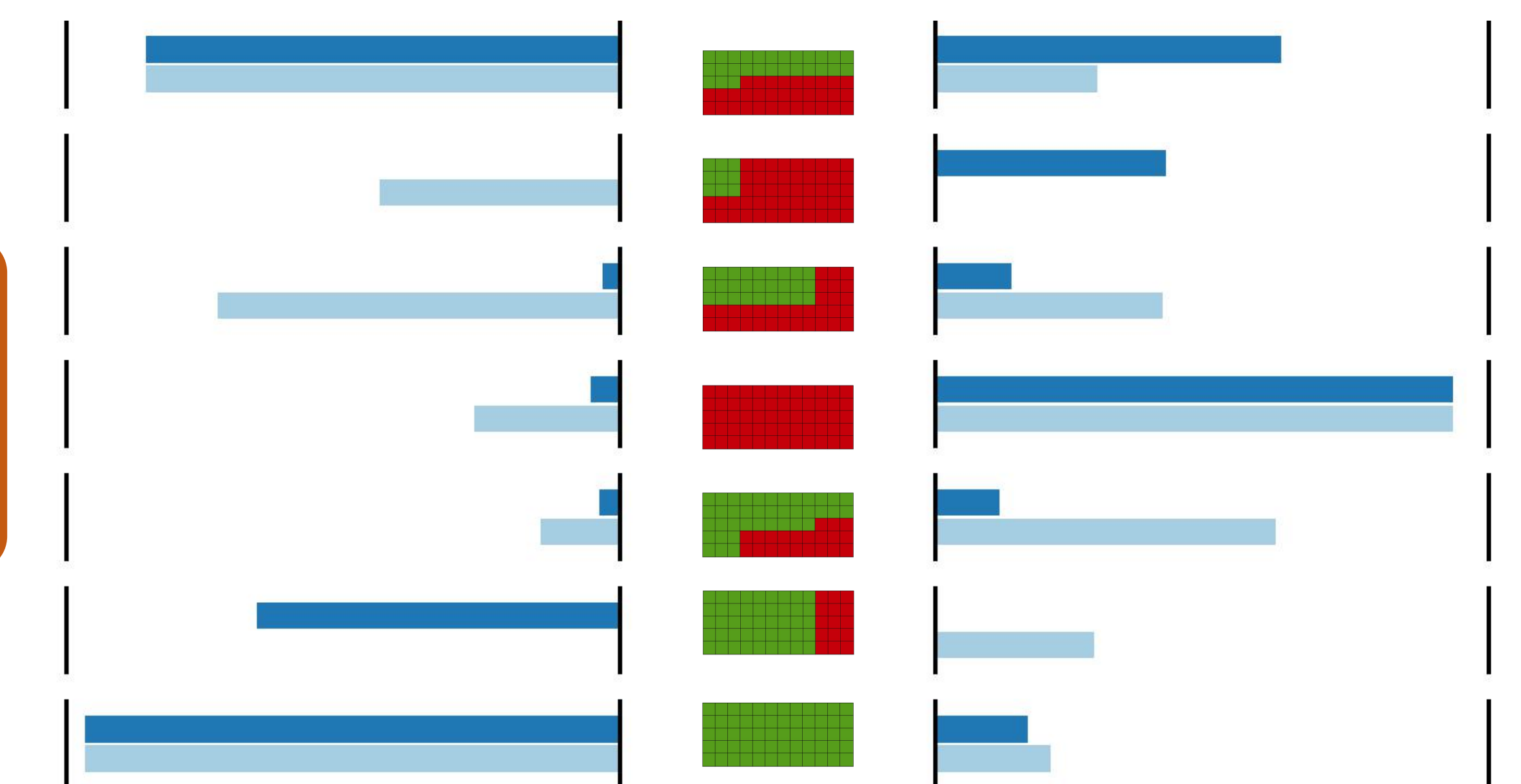
### ARGUMENTATIVITY

$$\text{Util}(s, u) = \underbrace{\log([s \in [[u]])]}_{\text{truth}} + \underbrace{\beta \log(|[[u]]|^{-1})}_{\text{informativity}}$$

$$+ (1 - \beta) \underbrace{\text{arg\_str}(u)}_{\text{argumentativity}} - \underbrace{\text{cost}(u)}_{\text{cost}}$$

$$\text{arg\_str}(u) = \log \frac{P([[u]] | H_0)}{P([[u]] | H_1)}$$

## MODEL FIT TO EMPIRICAL DATA



### EXPLORATION

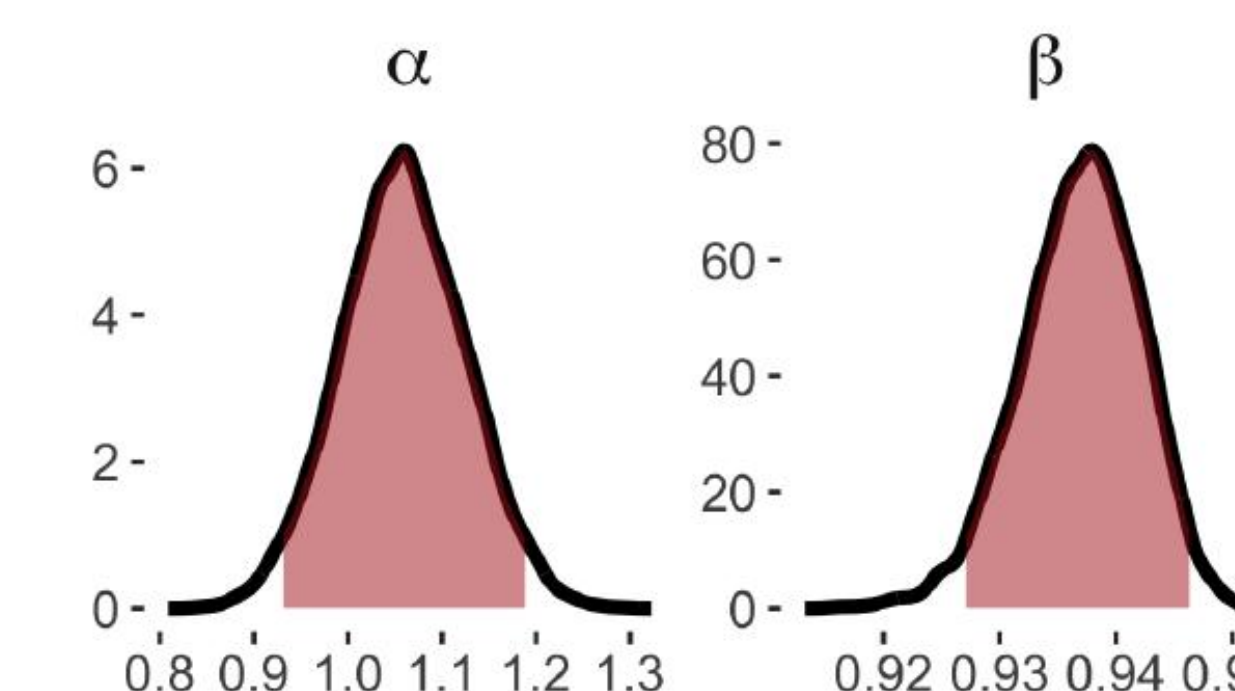
### INFORMATIVITY/ ARGUMENTATIVITY

~ FRAMING

← FRAMING COMPATABILITY → +

+ Argumentatively strong description

+ Semantically informative description



NEXT

## LINGUISTIC EXPRESSIONS OF QUANTITY

### USAGE

MANIPULATIVE  
+  
TRUTHFUL

### TRADE-OFF

ARGUMENTATIVITY  
↔  
INFORMATIVITY

### EXPERIMENT

In this exam **QUANT**<sub>1</sub> of the students got **QUANT**<sub>2</sub> of the questions **ADJ**.

**QUANT**<sub>1,2</sub>: <NONE, SOME, MOST, ALL>  
**ADJ**: <RIGHT, WRONG>

### CONDITION

HIGH ↑  
LOW ↓

### FREE PRODUCTION EXP

- Coding**
- Quantifier properties
  - Predicate properties