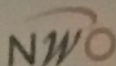




Universiteit Utrecht



Netherlands Organisation for Scientific Research

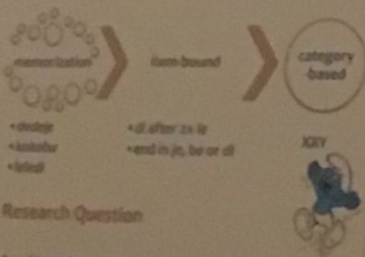
# Item-Bound vs Category-Based Generalization: An Entropy Model

Silvia RĂDULESCU, Efi GIANNOPOULOU, Sergey AVRUTIN, Fran...

From little evidence to abstract rules in language acquisition

1) Item-bound generalization

2) Category-based generalization (Gómez & Coker, 2006)

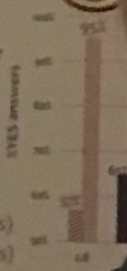


## Research Question

Are item-bound generalization and category-based generalization independent and qualitatively different mechanisms? Or is rule induction a phased mechanism: it starts out with memorization of specific items and finding regularities between them (item-bound generalization) and gradually moves to category-based generalization as a function of increasing input entropy.

## Experiments 1&2 - Effect of Entropy

- 71 adults, -22y, -4min, between-subjects
- 3-syllable XXY: *daa\_daa\_la*
- manipulated ENTROPY (number & frequency)
- 2.8 bits (4 × 7Xs / 4 × 7Ys)
- 3.5 bits (4 × 6Xs / 4 × 6Ys)
- 4 bits (2 × 12Xs / 2 × 12Ys)
- 4.75 bits (2 × 14Xs / 2 × 14Ys)
- 4.58 bits (1 × 24Xs / 1 × 24Ys)
- 4.8 bits (1 × 28Xs / 1 × 28Ys)



## Experiment 3 - Item-bound vs C...

Low Entropy Condition

• 41 adults (age 18-40)

• 3-syllable XXY: *daa\_daa\_la*

• Low Entropy (2.8 bits)

Test (10 trials)