

When Children accept Under-Informative Statements: Lack of Competence or Pragmatic Tolerance?



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Introduction

- Age of acquisition of scalar implicatures is unclear (ranging from 5 – 10 years old) [1][2][3]
- Pragmatic Tolerance Account proposes that young children may notice, but not penalize pragmatic violations (e.g., accept a statement such as “some of the apples are red” when all of the apples are red) [4]
- Binary Judgment Tasks obscure children’s competence with implicatures [5]
- What happens when children accept an under-informative statement?
- What can RTs tell us?

Hypotheses

Underinformative statements in a binary task:
Pragmatically **competent** children: REJECT
Pragmatically **oblivious** children: ACCEPT
Pragmatically **tolerant** children: ACCEPT

Underinformative statements in a graded task: [6][7]
Pragmatically **competent** children: SMALL REWARD
Pragmatically **oblivious** children: BIG REWARD
Pragmatically **tolerant** children: SMALL REWARD



Response times for under-informative statements:

- Pragmatically **competent** children: Rejection of under-informative statements > rejection of false statements
- Pragmatically **oblivious** children: Acceptance of under-informative statements = acceptance of true statements
- Pragmatically **tolerant** children: Acceptance of under-informative statements > acceptance of true statements

Method

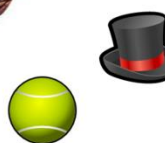
Participants: 75 neuro-typical Dutch children (43 girls)
age 4;0 – 9;8 (mean age = 6;3)

Ad hoc scales: e.g., <a shoe, a shoe and a ball>

Conditions:



Correct (1 object)
“In the basket, there is a shoe”



Incorrect (1 object)
“In the basket, there is a hat”



Correct (2 objects)
“In the basket, there is a shoe and a ball”



Incorrect (2 objects)
“In the basket, there is a shoe and a hat”

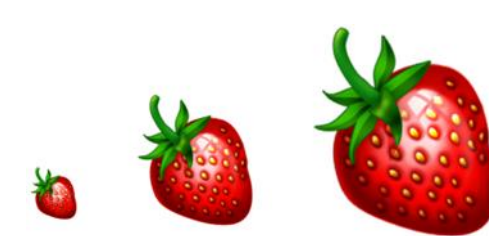
Under-informative (2 objects)
“In the basket, there is a shoe”

Materials: 8 sets of 3 monosyllabic words (binary task: objects; ternary task: animals)
40 trials: 8 items in 5 conditions

Procedure: Presentation of pre-recorded utterance
Presentation of picture
Button press by participant

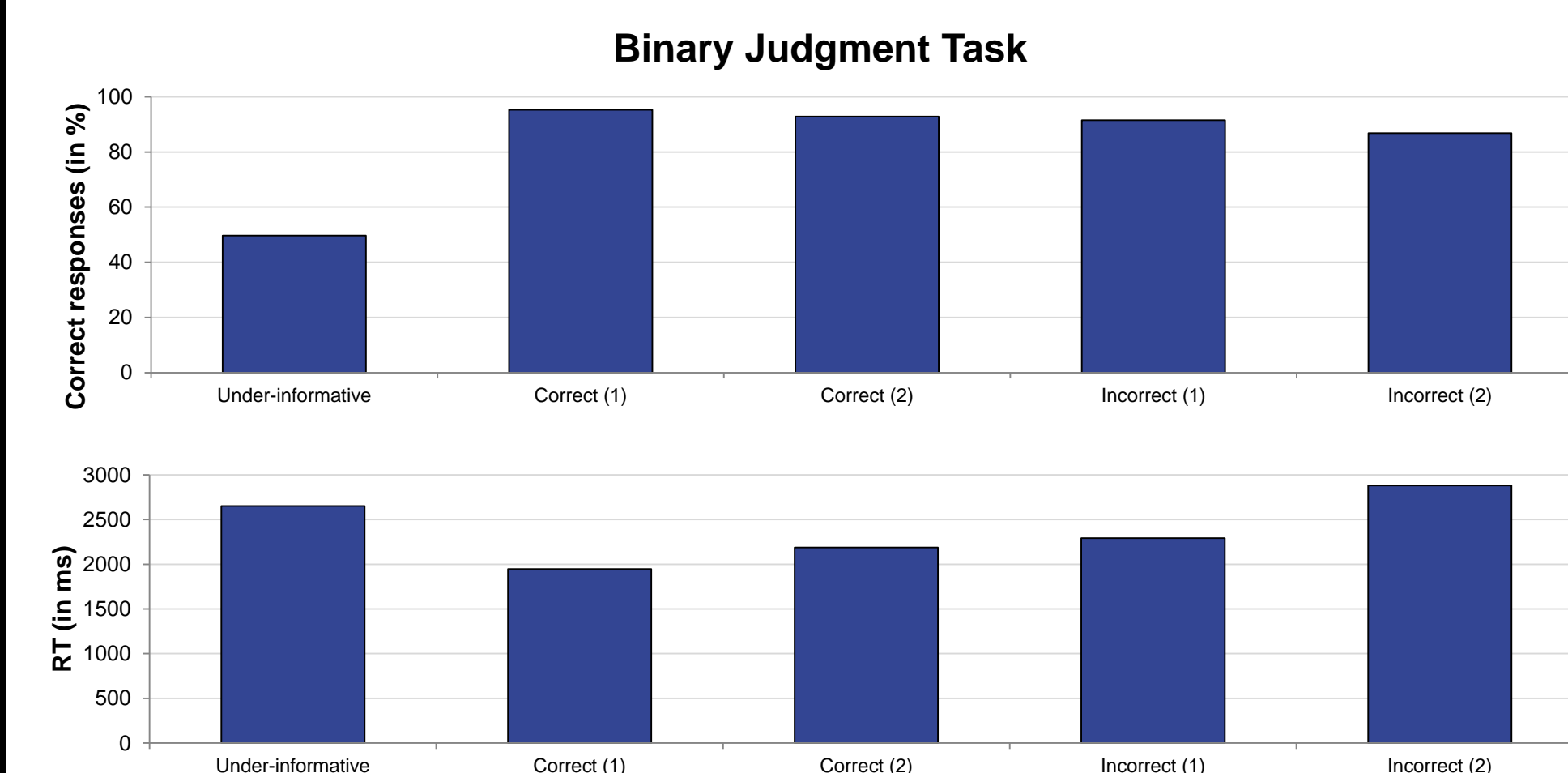
Binary Judgment Task
“Did the girl say it right?”

Ternary Judgment Task
“Give the girl a strawberry”

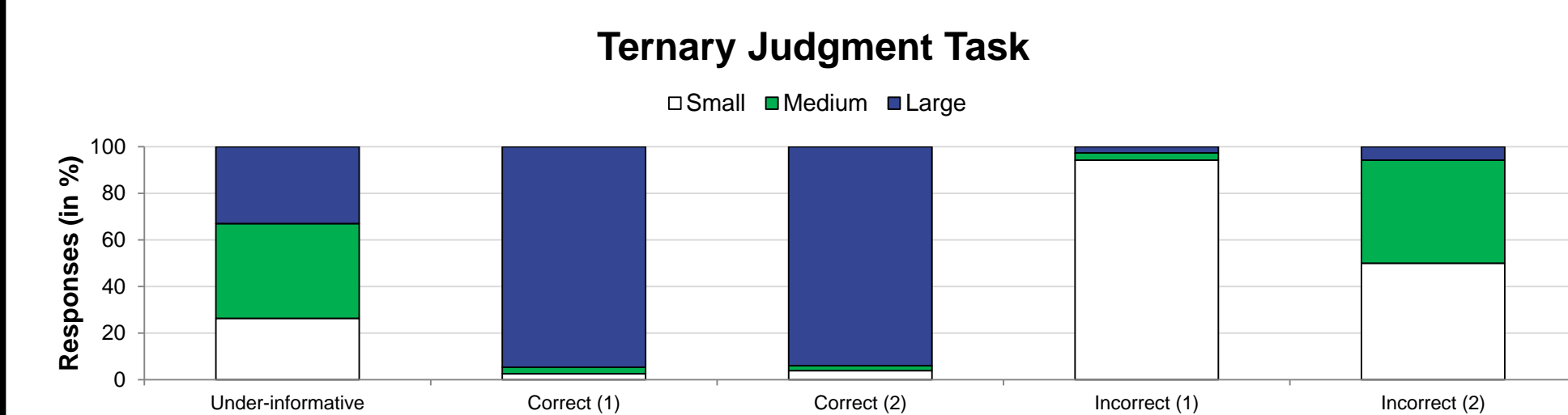


Participants first performed the binary judgment task (recording RTs), then the ternary judgment task

Results

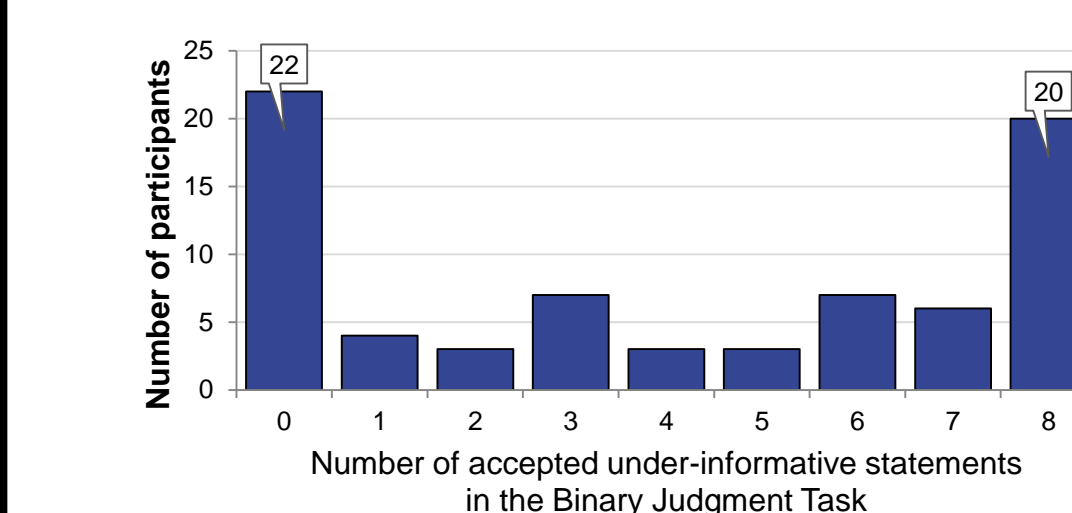


Under-informative statements were more difficult than correct and incorrect statements (more errors and longer RTs)

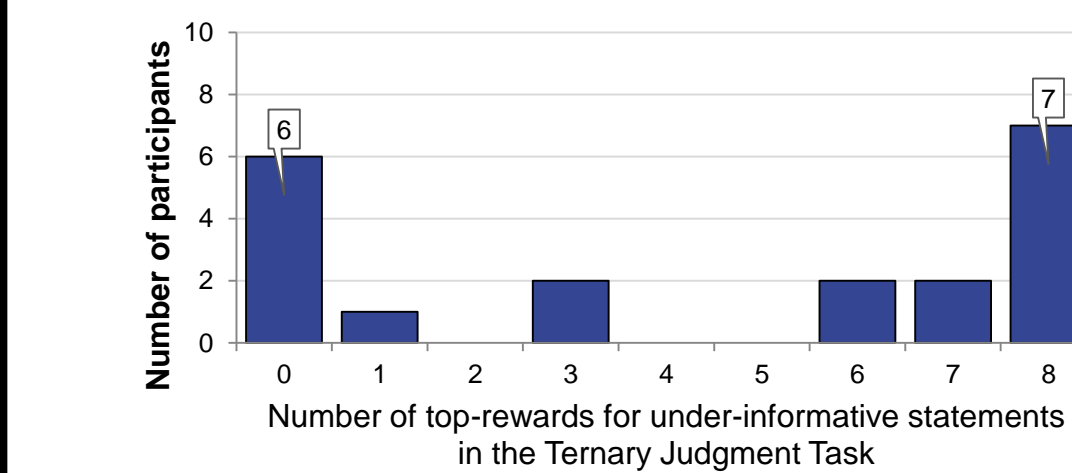


Correct statements received mostly large strawberries
Incorrect statements barely received large strawberries
Rewards for under-informative statements more mixed

Focus on under-informative condition:



Binary Task identified 22 fully competent participants



Ternary Task identified 6 pragmatically tolerant and 7 oblivious participants

Group	n	RT under-inf.	RT true	RT false	Stats	Match Prediction?
Competent	22	2529 ms		2191 ms	$p < .05$	✓
Oblivious	7	2207 ms	2136 ms		$p = .83$	✓
Tolerant	6	2098 ms	1389 ms		$p < .01$	✓

Discussion

- Binary Judgment Task allegedly shows:
- 22 children have acquired under-informativeness
 - 20 children have not acquired under-informativeness
- Ternary Judgment Task shows that of those 20 children:
- 7 children are pragmatically oblivious
 - 6 children are pragmatically tolerant

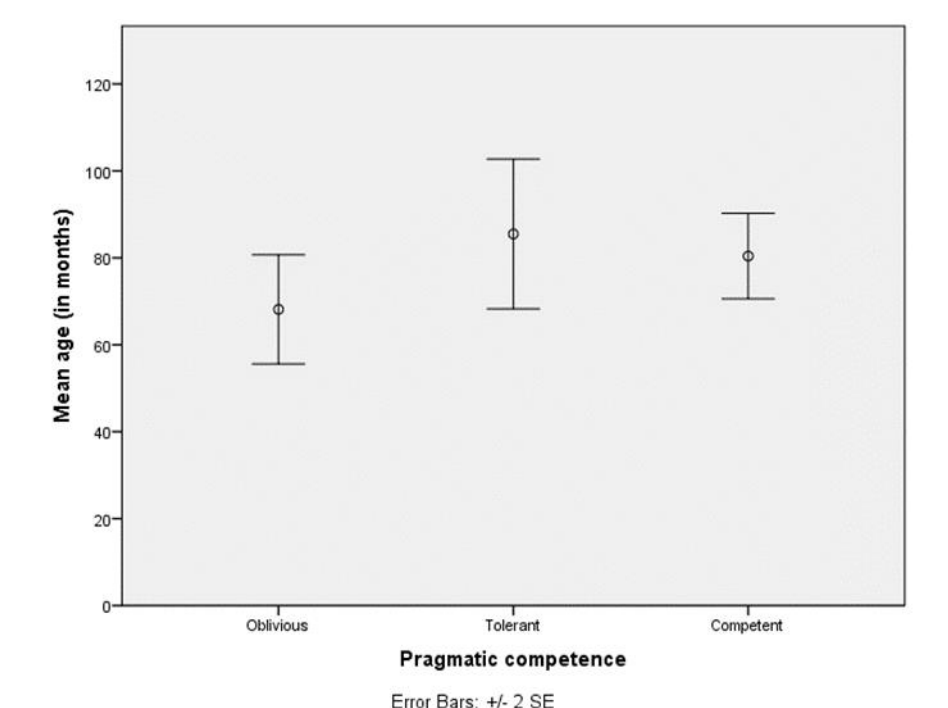
Binary Judgment Task should be used with caution!

Pragmatically tolerant children notice the pragmatic violation (longer RT), but still overrule its rejection

Remaining question: Is the additional time needed to...

- Generate implicature?
- Notice pragmatic violation?

Results suggest a developmental pattern:
1) pragmatically oblivious
2) pragmatically tolerant
3) pragmatically competent



References

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- [4] Katsos, N., & Bishop, D. V. (2011). Pragmatic tolerance: Implications for the acquisition of informativeness and implicature. *Cognition*, 120(1), 67-81.
- [5] Veenstra, A., & Katsos, N. (forthcoming). Assessing the comprehension of pragmatic language: Sentence judgment tasks. In A.H. Jucker, K.P. Schneider, & F. Bublitz (eds.) *Handbook of Pragmatics: Methods in Pragmatics*. Berlin: De Gruyter Mouton.
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More info

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