The role of context and information in the interpretation of scalar adjectives

Wesley Orth, Amanda Pogue, & Chigusa Kurumada

University of Rochester – Brain and Cognitive Sciences

Introduction

Difficulty in adjective interpretation:
- There are different types of adjectives which may require contextual information to be interpreted
- "Large cup vs. "Metal cup"
- Children treat some adjective types as variable depending on contextual factors

Hypothesis:
- Children differ from adults in the evaluation of adjective meanings in context
  1) They may rely less on contextual information when necessary
  2) They may be more susceptible to contextual information when it is in fact irrelevant

Experiment 1:
Do adults and children appropriately seek out information when needed to interpret adjectives?

Children (n=20): Ages (4;0-5;6).
Adults (n=20): Tested through MTurk.
Correct no flipping: bonus of $0.02; Incorrect: penalty of $0.05.
Prediction:
1) Both children and adults should flip more for relative-scalars
2) Children, compared to adults, should flip less for relative scalars

Experiment 2:
Do adults and children ignore irrelevant contextual information when making adjective decisions?

Children (n=20): Ages (4;1 – 5;10)
Adults (n=20): See Exp1

Prediction:
1) Flip rates should be the same for adults (who are likely to ignore the irrelevant context) in Exp. 1 and Exp. 2.
2) Children may flip less for relative-scalar and/or answer less accurately due to a greater degree of interference

Findings

1. Adults and children share a similar pattern of information seeking behavior across adjective types and extreme context conditions which can impact on both age groups.
2. 4 & 5 year olds are less likely to seek information in context when needed and have greater difficulty ignoring irrelevant contextual information than adults do. What changes in later developmental stages?

[What’s next?] More structured distributional information about relevant features (e.g., size, height, weight) of objects in the world may be a key to adult-like information seeking behaviors in relative-scalar interpretations.