

MUTUAL KNOWLEDGE CONFERENCE
JUNE 24-25 2021

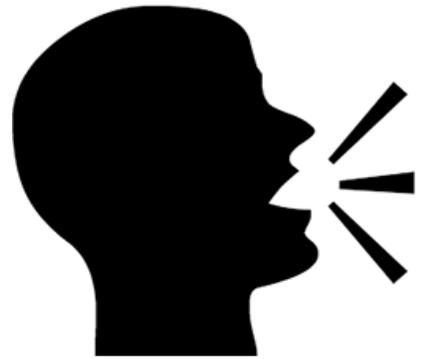
Preschoolers' use of emotional prosody to resolve communicative ambiguity as a function of speaker conventionality

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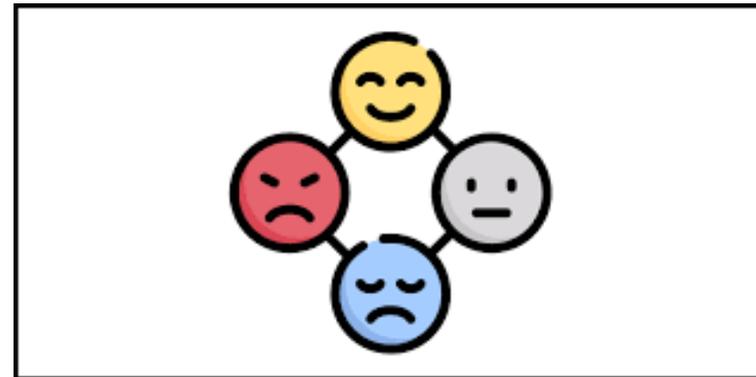


Emotional Prosody

A paralinguistic cue that provides information regarding a speaker's emotional state



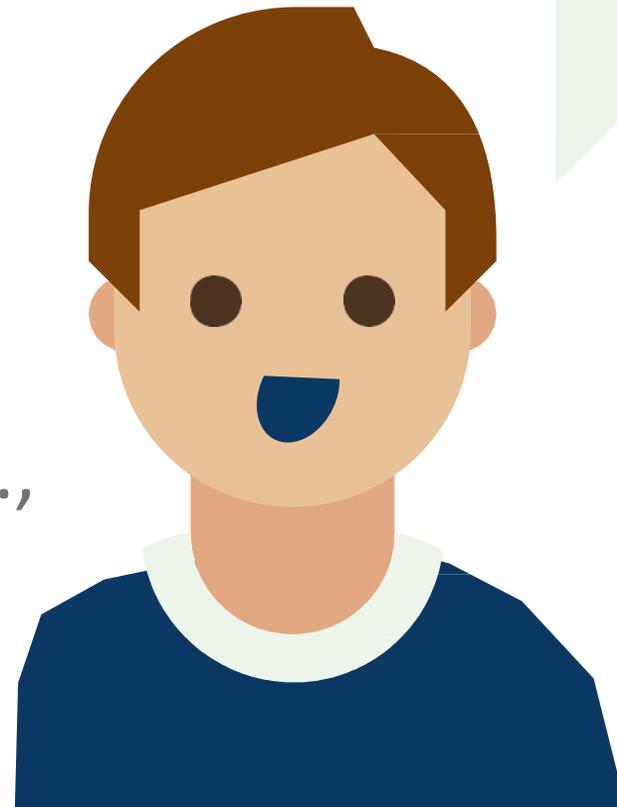
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Emotional Prosody

Also called *vocal emotion* or *vocal affect*

A helpful cue in many communication scenarios (e.g., resolving ambiguity)



During the preschool years, children's ability to use emotional prosody improves



(Berman, Chambers & Graham, 2010; 2013a; 2013b; 2016; Thacker, Chambers & Graham, under review)



Potential mechanisms that underlie the use of emotional prosody

Associative account



Socio-cognitive account



Pragmatic Adaptation

How listeners change their expectations regarding a speaker based on different evidence presented in a live communication



Research Question

How do 4- and 5-year-olds adapt to the emotional variability demonstrated by a speaker who uses **emotional prosody** in a **conventional** + **unconventional** way within the same interaction?



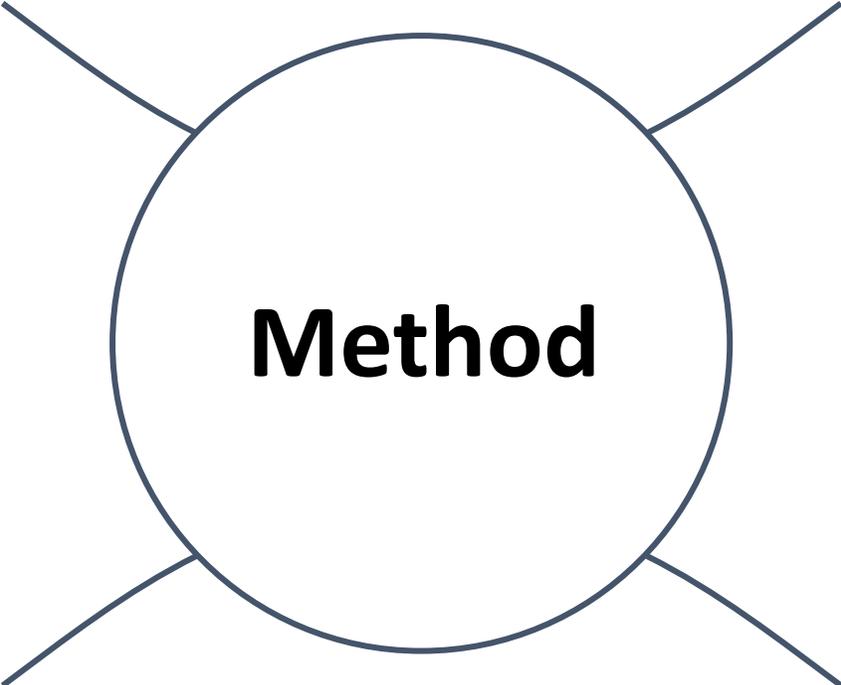
Participants

Ch.I.L.D. Research
Group database at the
University of Calgary,
Canada

Sample Size

A total of 66 children
were tested who were
4 (N=37) and 5 (N=29)
years old

Method



Procedure

Visual World Paradigm
*eye-tracking +
video recording*

Two Conditions

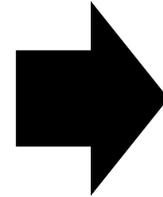
Conventional Prosody Use 1st
Unconventional Prosody Use 1st



Two conditions

Conventional Emotional Prosody Use 1st

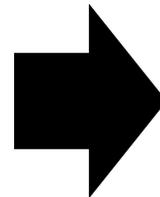
Conventional	
<i>Teaching</i> Trials 1 & 2	<i>Test</i> Trials 1-8



Unconventional	
<i>Teaching</i> Trials 1 & 2	<i>Test</i> Trials 1-8

Unconventional Emotional Prosody Use 1st

Unconventional	
<i>Teaching</i> Trials 1 & 2	<i>Test</i> Trials 1-8



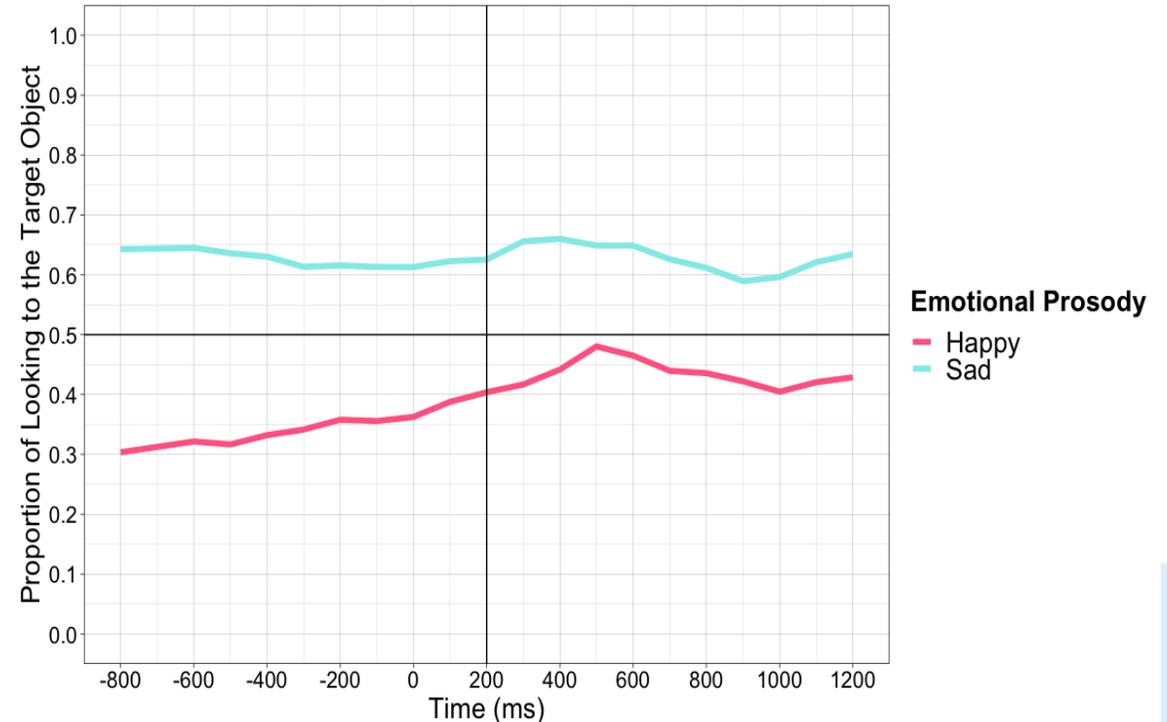
Conventional	
<i>Teaching</i> Trials 1 & 2	<i>Test</i> Trials 1-8



Results – eye gaze

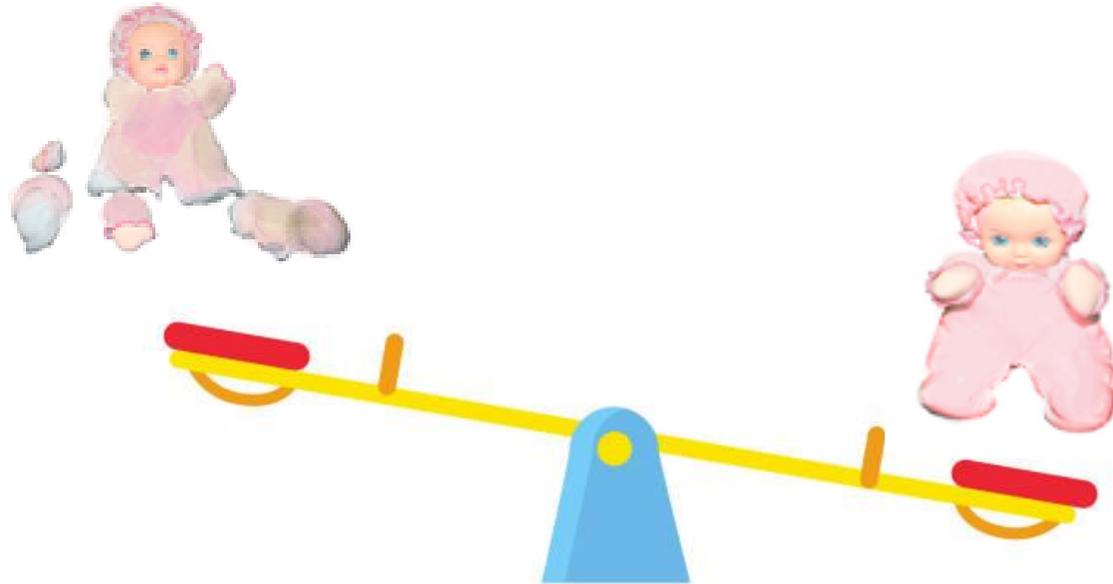
Linear mixed effects model = main effect of emotional prosody ($\beta = .69, SE = .30, t = 2.33, p = .03$)

Children were more likely to match the target object (e.g., broken doll) when they heard **negative** compared to **positive** emotional prosody.



Results – eye gaze

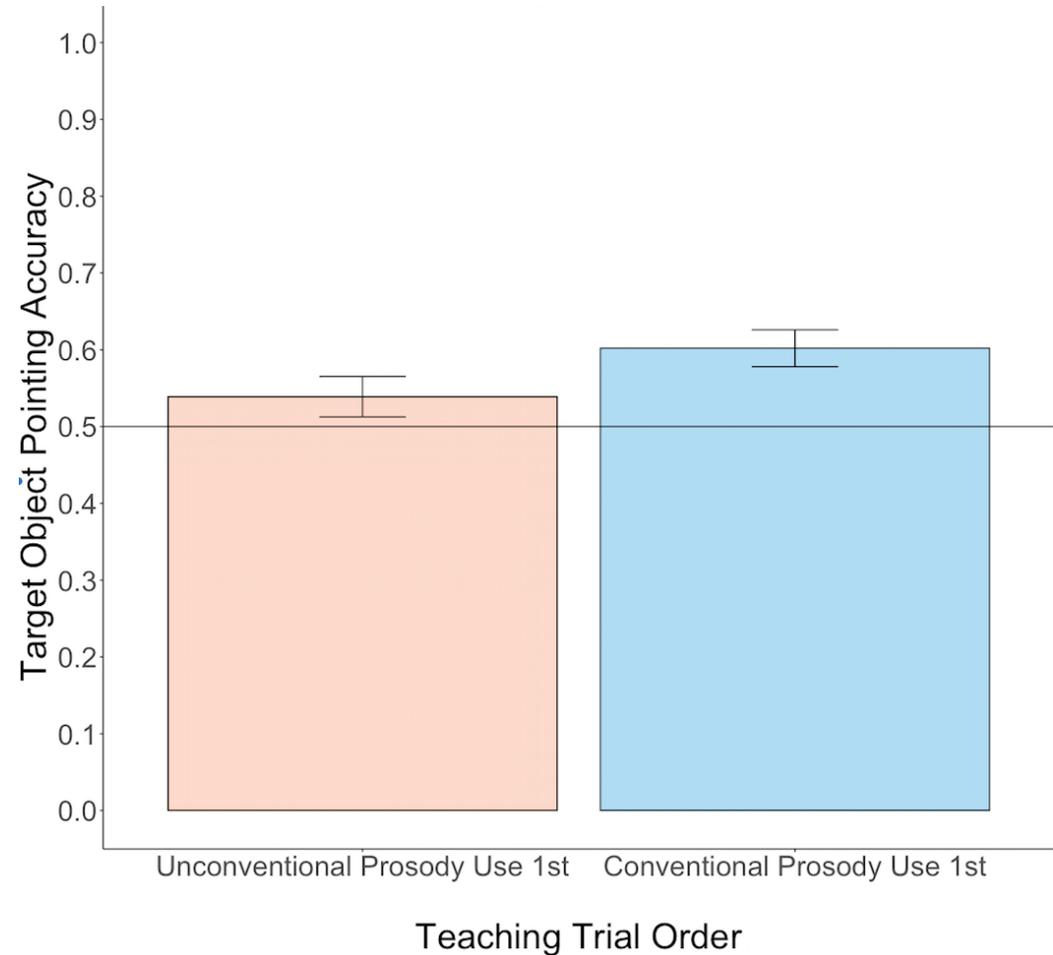
The eye gaze findings support the presence of a negativity bias, whereby greater attention is directed towards negative stimuli compared to positive stimuli.



Results – pointing

Logistic mixed effects model =
main effect of condition
($\beta = .24$, $SE = .11$, $t = 2.13$, $p = .03$)

Children were more likely to
match the target object (e.g.,
broken doll) when the speaker
used emotional prosody in a
conventional way first.



Results – pointing

The pointing results suggest that as early as 4 or 5 years of age, children will modify their use of emotional prosody cues to resolve ambiguity based on speaker conventionality.

On other words, children respond in a flexible manner based on if the speaker used emotional prosody in a way that abides to, or disrupts, norms of communication.





Conclusions

The outcomes observed suggest that children use **socio-cognitive mechanisms** as they process language on-line.

This research contributes to the body of knowledge examining preschooler's pragmatic thresholds



Thank you!

