When is it Best to go First?
A Reversal of the Temporality Effect in 3-5 Year Olds.
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SUMMARY
• We tested 3-5 year olds on a version of Byrne’s Temporal Order Effect task.
• Children did not show the adult bias to blame the second player when the outcome of the game was negative.
• However, we found the surprising result that the temporal order effect was reversed when the outcome of the game was positive.
• The difference between the win and lose trials suggests that children may bring counterfactual thinking to bear on the problem.

METHOD
PARTICIPANTS: 20 younger children (Mean=52 months, range 47-56) and 22 older children (mean 62, 57-70)

MATERIALS: We used two dolls, a set of cards coloured blue and red on one side only, and sticker prizes.

PROCEDURE: The game was explained: the dolls take it in turns to pick a card. If they pick the same colour they each win a prize. If they pick different colours they don’t win.

Children had four trials: two win trials (cards match) and two lose trials (cards don’t match).

Children were asked to judge whether the dolls had won or not.
Followed by the test question “Who feels worse?” or “Who feels best?”

‘Correct’ answer (according to the counterfactual theory) is the second player.

RESULTS & DISCUSSION

Children understood the game, but did better judging the outcome of the win trials than the lose trials.

Children performed ‘better’ on the lose trials than the win trials t(41) = -2.82, p = .007, i.e. they were more likely to choose the second player on lose trials.

Children performed at chance on the lose trials t(41) = 0.00, p > .999
Children showed a preference to chose the first player on win trials t(41) = -3.75, p = .001

We did not find the expected temporality effect with 3-5 year old children. If it is dependent on counterfactual thinking, it may be related to later developments e.g. thinking about counterfactuals as possibilities, Beck et al. (2006). However, we did find a reversed effect on win trials. It is not clear whether this may result from counterfactual thinking about the first player’s card, “I could have picked the other colour” or about the second player’s card, “She could have picked the other colour”. If this result does demonstrate counterfactual thinking, it would be out of line with findings that children and adults are more likely to consider counterfactuals following negative outcomes (e.g. German, 1999).

REFERENCES