

# Theory of Mind: Psychosocial effects



# Introduction

- Overview for today
- Reminders
- Important notice

# Reminders

- Essay: 1,500 words on the SECTION you presented in your group presentation.
- Email me your presentation slides once your presentation is over

# Readings for this week:

- Shakoor, S., Jaffee, S. R., Bowes, L., Ouellet-Morin, I., Andreou, P., Happé, F., Moffitt, T. E., et al. (2012). A prospective longitudinal study of children's theory of mind and adolescent involvement in bullying. *Journal of Child Psychology and Psychiatry*, 53(3), 254–61. doi:10.1111/j.1469-7610.2011.02488.x
- Slaughter, V., Dennis, M. J., & Pritchard, M. (2002). Theory of mind and peer acceptance in preschool children. *British Journal of Developmental Psychology*, 20(4), 545–564. doi:10.1348/026151002760390945



Theory of Mind:

Understanding that other people hold different thoughts and beliefs that are separate from our own and that these beliefs may not reflect reality

...so that we can PREDICT their behaviour.

Talwar, V., Gordon, H. M., & Lee, K. (2008). Lying in the elementary school years. *Developmental Psychology*, 43(3), 804–810.

Theory of mind understanding plays an important role in children's ability to lie consistently.

Lying refers to the act by which one deliberately makes a false statement with intent to instill false beliefs into the mind of the statement's recipient (Lee, 2000).

- n= 172, aged 6-11 years, North America

- When do children start to lie?



# Art of Lying

- Assessment of own and other mental states
- construct and produce false statements that differ from their true beliefs about the state of affairs.
- false statements must be carefully constructed such that they will not arouse suspicion in the recipient (must match verbal and nonverbal behaviours)





- consistent with the false statement but inconsistent with their true beliefs
- and to conceal verbal and nonverbal behaviors that are consistent with their true beliefs but incongruent with the false statement.

First order or second order ToM?

# Experiment

- Wanted to find out the relation between verbal deception and second order false belief
  
- Talwar, V., Gordon, H. M., & Lee, K. (2008). Lying in the elementary school years. *Developmental Psychology*, 43(3), 804–810.

# The experiment

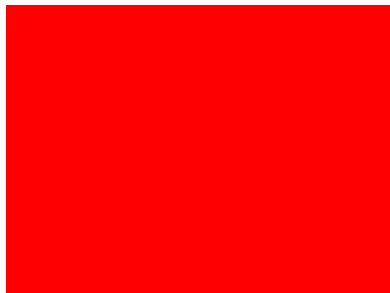
- Trivia questions

“which explorer discovered Tunisia?”

Tells children NOT to peek at answer cards

Experimenter left room leaves last question card on table for 60 seconds.

Returns and asks if they peeked & asks last question



- **Entrapment questions**

# Results

- Children's ability to maintain consistency between their initial lie and subsequent verbal statements increased with age.
- This ability is also positively correlated with children's 2nd-order belief scores, suggesting that theory of mind understanding plays an important role in children's ability to lie consistently.

# ToM in Preschool Social Acceptance

Slaughter, V., Dennis, M. J., & Pritchard, M. (2002). Theory of mind and peer acceptance in preschool children. *British Journal of Developmental Psychology*, 20(4), 545–564.

**Hypothesis: preschool children's ToM is related to their peer social acceptance**

N= 78, aged 4-6 years

Australia



# Suggestion on how it is linked?

- **Better level of insight:** recognise and appreciate the desires, perspectives and emotions of their peers thus leading to interpersonal sensitivity
- Adequate interactions with peers forms the **context** in which children develop ToM (more advanced skills because they enjoy more opportunities to interact with their peers.

# Method-

All children within the peer group made both positive and negative peer nominations.

Children were then requested to nominate the three children they liked to play with the most (Like Most—LM) and the three children they did not like to play with very much (Like Least—LL).

# Categories

- Popular
  - Controversial
  - Average
  - neglected or
  - rejected within their peer groups.
- 
- Also given 4 ToM tests



# RESULTS

Peer status influenced by:

## **COGNITIVE and BEHAVIOURAL factors.**

- Cognitive factors: intelligence, language ability, perspective taking
- Behavioural factors: aggression and prosocial behaviour (greater difference between rejected and popular children).

Table 2. Mean theory of mind scores for children in five peer status groups in Study 1

Peer status	N	Average age (in months)	Theory of mind score (range 0–5)
Popular	19	61.6 (4.2)	3.09 (1.19)
Controversial	8	62.5 (6.4)	3.28 (1.22)
Average	12	64.3 (5.0)	2.94 (1.00)
Neglected	10	59.7 (5.7)	2.53 (1.56)
Rejected	16	59.8 (4.8)	2.17 (1.31)

Note. Standard deviations are shown in parentheses.

N= 92

**Table 5.** Mean age and scores for children in the five peer status groups in Study 2

Peer status	N	Age (months)	False belief (range 0–4)	Prosocial (range 0–40)	Aggression (range 0–50)	PPVT (raw score)
Popular	19	<b>61.5</b> (6.2)	<b>3.16</b> (1.02)	<b>24.63</b> (8.20)	<b>4.42</b> (6.91)	<b>54.69</b> (15.02)
Controversial	9	<b>61.6</b> (6.4)	<b>2.00</b> (1.58)	<b>16.11</b> (6.49)	<b>14.67</b> (10.49)	<b>45.33</b> (9.45)
Average	16	<b>61.1</b> (6.0)	<b>3.06</b> (.93)	<b>16.81</b> (10.5)	<b>7.38</b> (9.34)	<b>52.80</b> (16.84)
Neglected	14	<b>60.5</b> (6.2)	<b>2.29</b> (1.49)	<b>20.71</b> (10.18)	<b>10.57</b> (13.05)	<b>50.70</b> (17.49)
Rejected	20	<b>59.4</b> (6.0)	<b>2.80</b> (1.44)	<b>14.00</b> (10.46)	<b>15.90</b> (14.69)	<b>44.70</b> (9.85)

Note. Mean scores in bold typeface; Standard deviations are shown in parentheses.

## Summary of findings:

Impact of theory of mind ability on peer acceptance is modest but increases with children's age.

Individual differences in social–cognitive abilities may impact more strongly on peer acceptance as children get older.

ToM best predictor for peer acceptance

- Findings: bright, verbally adept children tend to be relatively popular among their peers
- For younger children, behaviour was a more important predictor for peer acceptance

# So far, we have talked about:

- Lying: false statements
- Peer social acceptance

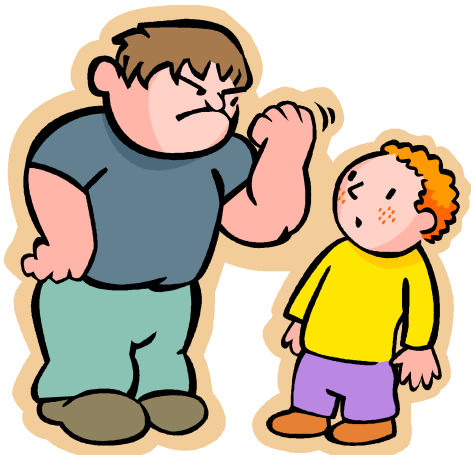
# What is bullying?

- ❑ Emotional/ psychological
- ❑ Physical
- ❑ Monetary

# ToM & Bullying

Shakoor, S., Jaffee, S. R., Bowes, L., Ouellet-Morin, I., Andreou, P., Happé, F., Moffitt, T. E., et al. (2012). A prospective longitudinal study of children's theory of mind and adolescent involvement in bullying. *Journal of Child Psychology and Psychiatry*, 53(3), 254–61.

Question: mechanisms which lead children to be involved in bullying:

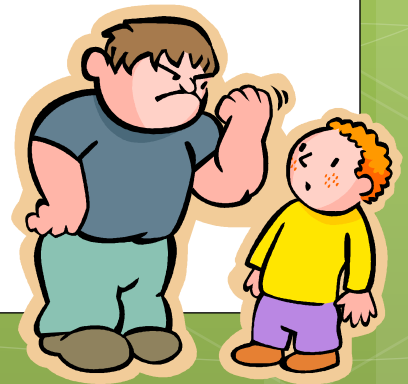


Longitudinal study with 2,232 (twins) children in the UK (England and Wales) seen at ages: 5, 7, 10 and 12.

# ToM & Bullying

ToM needed for decoding social cues and for adjusting behaviours accordingly. ToM skills underpins everyday social interactions.

Bullying is a negative social experience involving on average 27% of children and adolescents every year worldwide as victims, bullies or bully-victims (children who have been bullied and have bullied others) (Craig et al., 2009).





## 3 ways

- Inability or poor ability to detect unspoken cues such as non-reciprocal social interaction = potential for exploitation and victimisation
- Affects ability to negotiate conflicts or to stand up for themselves = easy targets for threats and abuse
- May be biased when processing social cues and wrongly interpret ambiguous situations as hostile.

## At age 5

ToM tested using 8 ToM tests

IQ measures using the Weschler Preschool and Primary Scale of Intelligence (short form)

Parents and teachers were interviewed to get information on the children's emotional and behavioural problems (again measured at age 7 and 10)

## At age 7

Interviews with mothers and teachers on child's involvement in bullying

## At age 12

Assessed bullying-victimisation (mothers and children's report)

By age 7 (between 5-7 years):

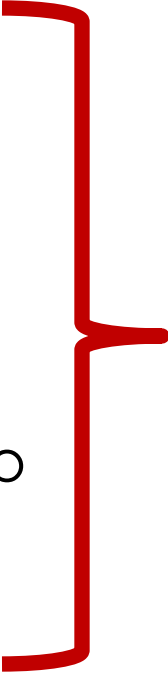
- Victims: (N = 273, 13%),
- Bullies (N = 381, 17%)
- Bullies-victims (N = 138, 6%)

By age 12

- Non bullies, non-victims and non- bully-victims: (N = 971; 45%).
- Bullies (N = 167; 8%) - children who have only bullied others
- Bully victims (N = 304; 14%) are children who have been bullied and have bullied others.
- Victims (N = 704; 33%) are children who have been victimized but who have not bullied others

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Lower ToM at age 5, compared to non involvement

Among the three, bully-victims scored the lowest

# Overall findings

- a. Poor ToM in early childhood- leads to an increased risk of being a victim of bullying in adolescence**
- b. Associations found between SES, child maltreatment and bullying- for children with poor ToM, these factors play a role in the development of becoming a bully**

# Conclusion

- Lying requires false beliefs (second-order) for successful deceit. Verbal consistency in lying becomes better with age (semantic leakage in younger children)
- ToM and peer acceptance: behavioural factors are more important in young children but cognitive factors become more important as they grow older
- Bullying and ToM: