**Gender Development** 



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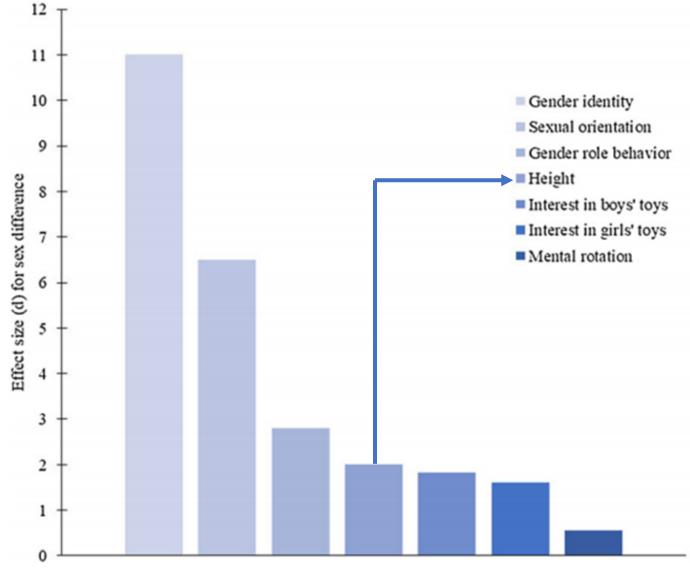
#### **Evaluating Average Differences**

• Cohen's d

0.8 = Large

0.5 = Medium

0.2 = Small



### **Today - Focusing on Play**

- Early Emerging
- Enormous and Persistent Differences
- Foundation of Human Gender Development?

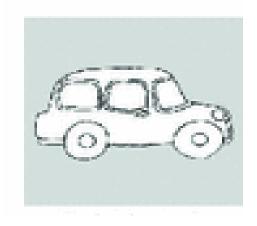
- Measuring Play
- Early Influences
- Long-Term Implications



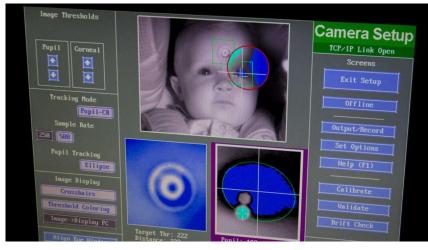


- Early Influences
- Long-Term Implications

### Measuring Play -Visual Preference in Infants-









### Measuring Play -Observed Behaviour in Children-





## Measuring Play -Self-Reported Preferences in Children-

- Ask children to rate different toys and activities
  - ➤ E.G. "dressing up games", "sports competition", "reading or watching things about fairy tales and princesses"



### Measuring Play -Parent-Reported Behaviour in Children-

- Standardised Questionnaire (e.g., The Pre-School Activities Inventory; PSAI)
  - E.G. "Plays with trains, cars or airplanes", "Plays house", "Enjoys rough-and-tumble play", "Plays with girls"
  - > 5-point Likert scale (from "Never" to "Very Often")

Measuring Play





Long-Term Implications

# Early Influences on Play -Early Androgen Exposure-

Kung et al. (2024)

- Early androgen exposure -> behavioural sexual differentiation
- Critical windows: Prenatal and early postnatal periods
- Numerous animal experiments show organisational influences
- Some evidence suggesting organisational influences on children's play

### Early Influences on Play -Social Mechanisms-

Kung (2022)

- Learning from a range of social agents
- Modelling and reinforcement
- Creating/sustaining/changing through social mechanisms

# Early Influences on Play -Cognition-

#### Kung (2022)

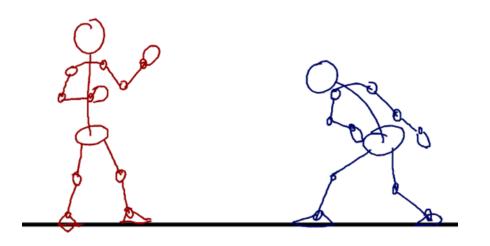
- Gender identity, labels, and schemas
- Learning gender appropriateness
- Matching with own identity
- Behaviour guided by gender cognition

- Measuring Play
- Early Influences
- Long-Term Implications



## Long-Term Implications of Play -Link to Physical Aggression-

 Kung et al. (2018) – Childhood gender-related play longitudinally predicts physical aggression in adolescence



## Long-Term Implications of Play -Link to Occupational Interests-

 Kung (2021) - Childhood gender-related play longitudinally predicts occupational interests in adolescence











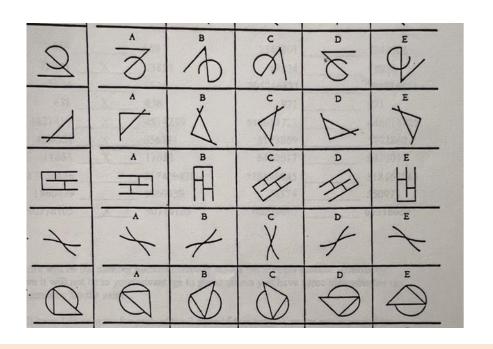


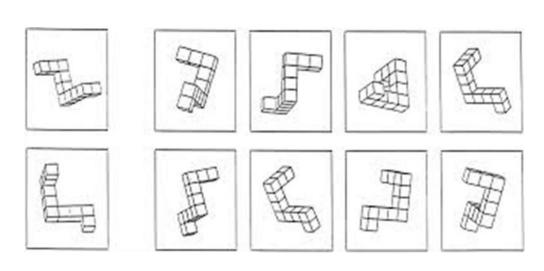




# Long-Term Implications of Play -Link to Spatial Skills-

 Kung et al. (under review) - Childhood gender-related play longitudinally predicts mental rotation performance in adolescence





### **Summary**

- Biological, social, and cognitive factors contribute to differences in boys' and girls' play
- Play is not just something fun for boys and girls to do but has long-term implications for different aspects of their development