

# Theory of Mind (ToM)

- The ability to understand that other people have *beliefs* and *desires*, and
- these beliefs and desires are the *causes* of their behavior
- Turning point: between 3 and 4 years of age

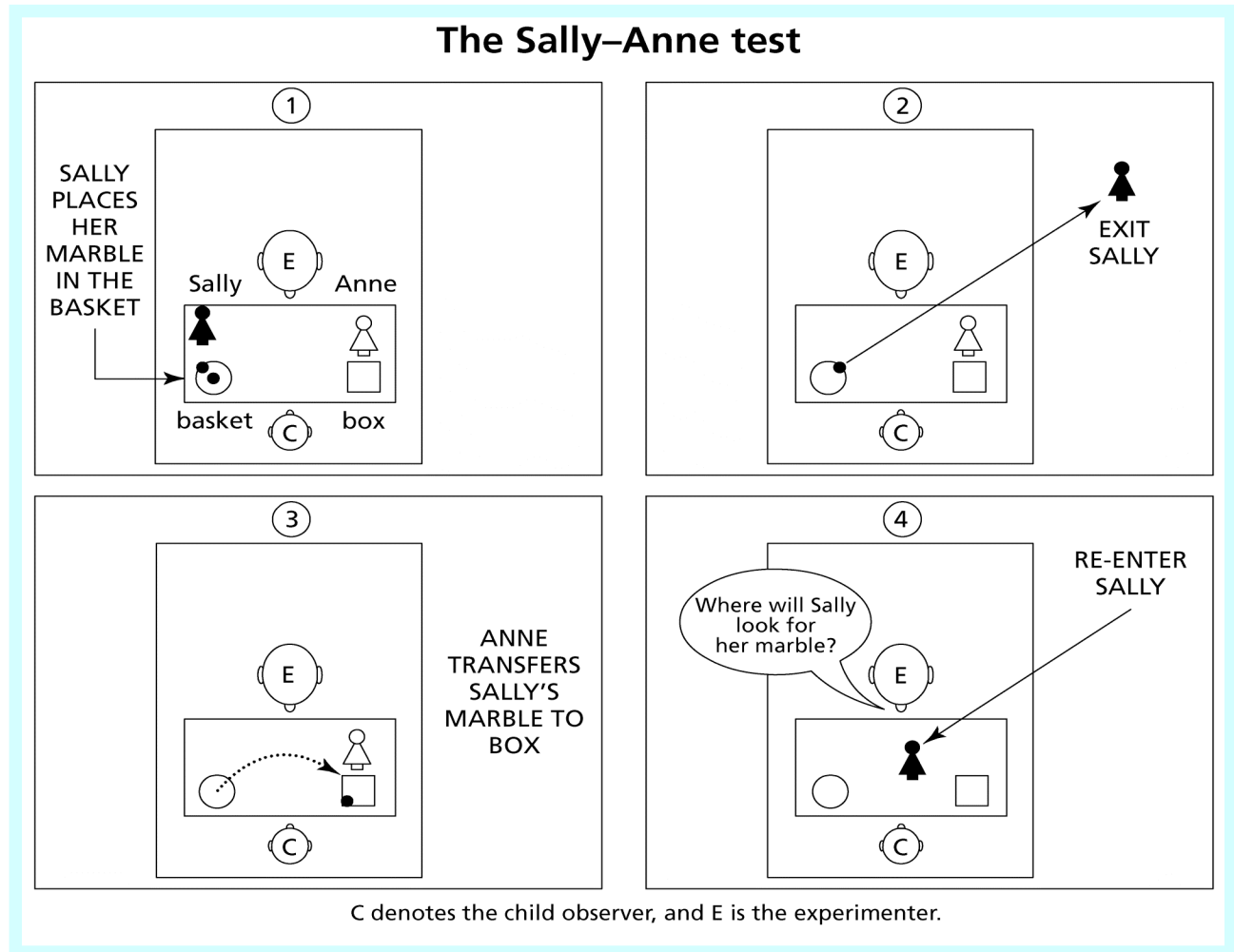
# False belief task 1.

- Version 1: crayon task
  - First child asked what's in the box, they say 'crayons'
  - Then box opened: candles
  - Child asked: 'Jimmy's coming in next. What will he say when I'll ask him what's in the box?'
- 3-year-olds: fail, 4-year-olds: pass

Theory of Mind  
Preschool

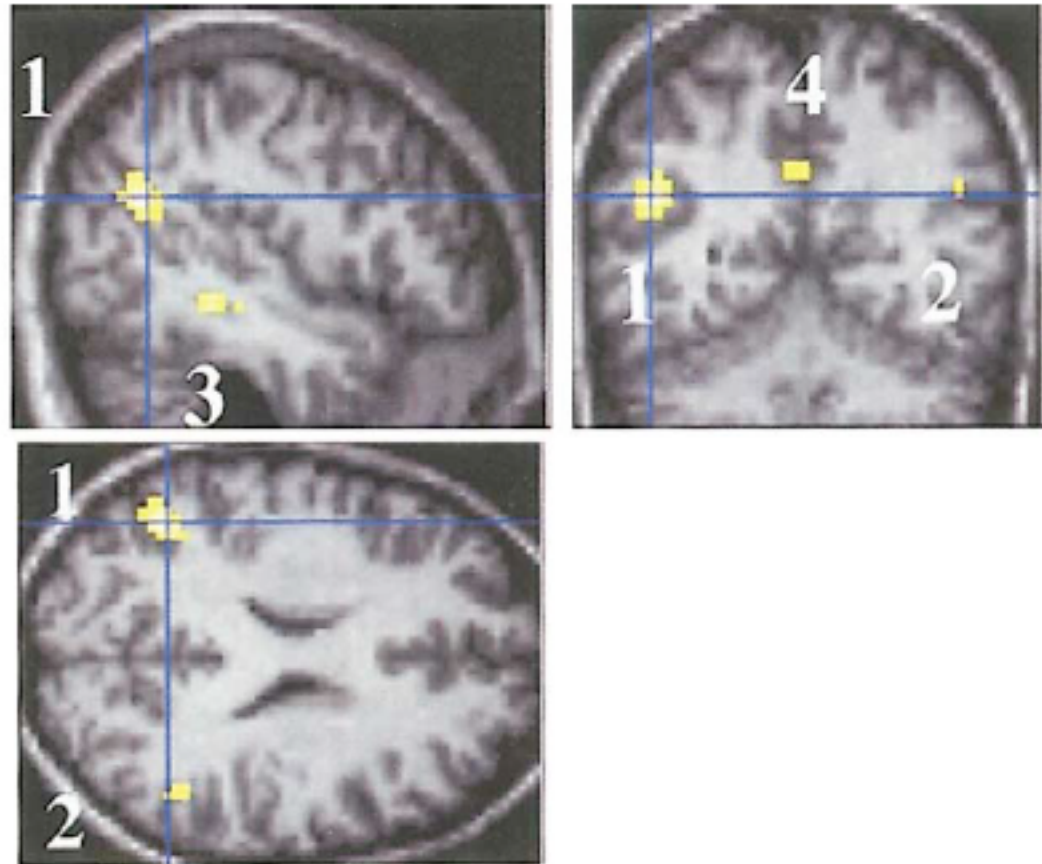
# False belief task 2.

- Version 2



- Theory of Mind
  - not really a *theory*
  - more like a *mechanism*, such as vision, language and memory
- Also called ‘mindreading ability’, ‘mentalizing’
- Develops early, some elements (e.g. joint attention) are present even before the child passes the false belief test
- Have been shown to engage a specific area of the brain

- Temporo-parietal junction: more activation for stories involving mental states than non-mentalistic stories



# ToM abilities in mammals

- Dogs are better ‘mind-readers’ than chimpanzees:
  - Exp. points/taps/signals at one of the containers  
- dogs understand the signal
  - Genetic component: wolves reared by humans perform worse than dogs
  - In the past 10 000 years, dogs were selected mostly based on their Theory of (Human) Mind abilities