# Theory of Mind

Summary

Theory of mind refers to the capacity to understand other people. It includes the knowledge that others' beliefs, desires, intentions, emotions, and thoughts may be different from one's own.

Key Components of Theory of Mind

* **Understanding beliefs:**Recognizing that others may hold beliefs that are different from one's own and that these beliefs influence their actions and decisions.
* **Recognizing intentions and desires:**Recognizing that others may have intentions and desires that are different from one's own and that these intentions and desires motivate their behavior.
* **Emotional understanding:**Empathizing, being able to attribute emotions to oneself and others.
* **Perspective:**Viewing the world from a different point of view, "putting yourself in someone else's shoes."
* **False belief understanding:**Recognizing that others may hold false beliefs about the world and being able to understand and predict behavior based on these beliefs.

Development

Typically, the theory of mind develops in children between **ages 4-5 years old.** They become more aware of their mental state and can distinguish between those of others.

Theory of mind continues to develop throughout adolescence and adulthood, influenced by social experiences, cognitive development, and cultural factors.

Developmental disorders that impair the theory of mind include autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), developmental language disorders, schizophrenia, and other neurological conditions. Individuals with these disorders have difficulty understanding and interpreting the thoughts, feelings, and intentions of others, which can affect their social interactions and communication skills.

Important Terms

* Mirror Neurons: Neurons that discharge when an individual executes a motor function and when he/she observes another individual perform the same or similar motor function. They play a role in understanding the actions and intentions of others.
* Sally-Anne Test: a psychological test used in developmental psychology to measure a person's social cognitive ability to attribute false beliefs to others.
* Egocentrism: the inability to differentiate, accurately assume, or understand any perspective besides one's own, almost the opposite of theory of mind.
* Pre-frontal cortex: the brain region that is particularly associated with theory of mind.

History

Theory of mind was first introduced in **1978** by **Premack and Woodruff** when they experimented on chimpanzees to test if they could understand the goals and intentions of humans. The study involved showing adult chimpanzees a series of videotaped scenes of a human struggling with a variety of problems. The chimpanzees were then shown two photos. The first photo depicted the human trying to solve the problem (in this case, trying to reach an out-of-reach banana), and the second photo was the correct solution to the problem.

[Photos found through this link](https://www.open.edu/openlearn/health-sports-psychology/living-psychology-animal-minds/content-section-6.2#:~:text=David%20Premack%20and%20Guy%20Woodruff,called%20a%20Theory%20of%20Mind)

Premack and Woodruff found that the chimpanzees were able to successfully choose the photograph that was the correct solution to the problem. They believed that the chimpanzees recognized the problem, understood the human's purpose (intentions and goals), and chose the solution that was compatible with the purpose.

Their two key theories about the theory of mind were (1) mental states are not directly observable, and (2) the system is used to make predictions about an individual's behavior. They found their theories to be true when the chimpanzees successfully identified and understood the goals and intentions of the humans.

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