

Understanding Self and Others

Theory of Mind



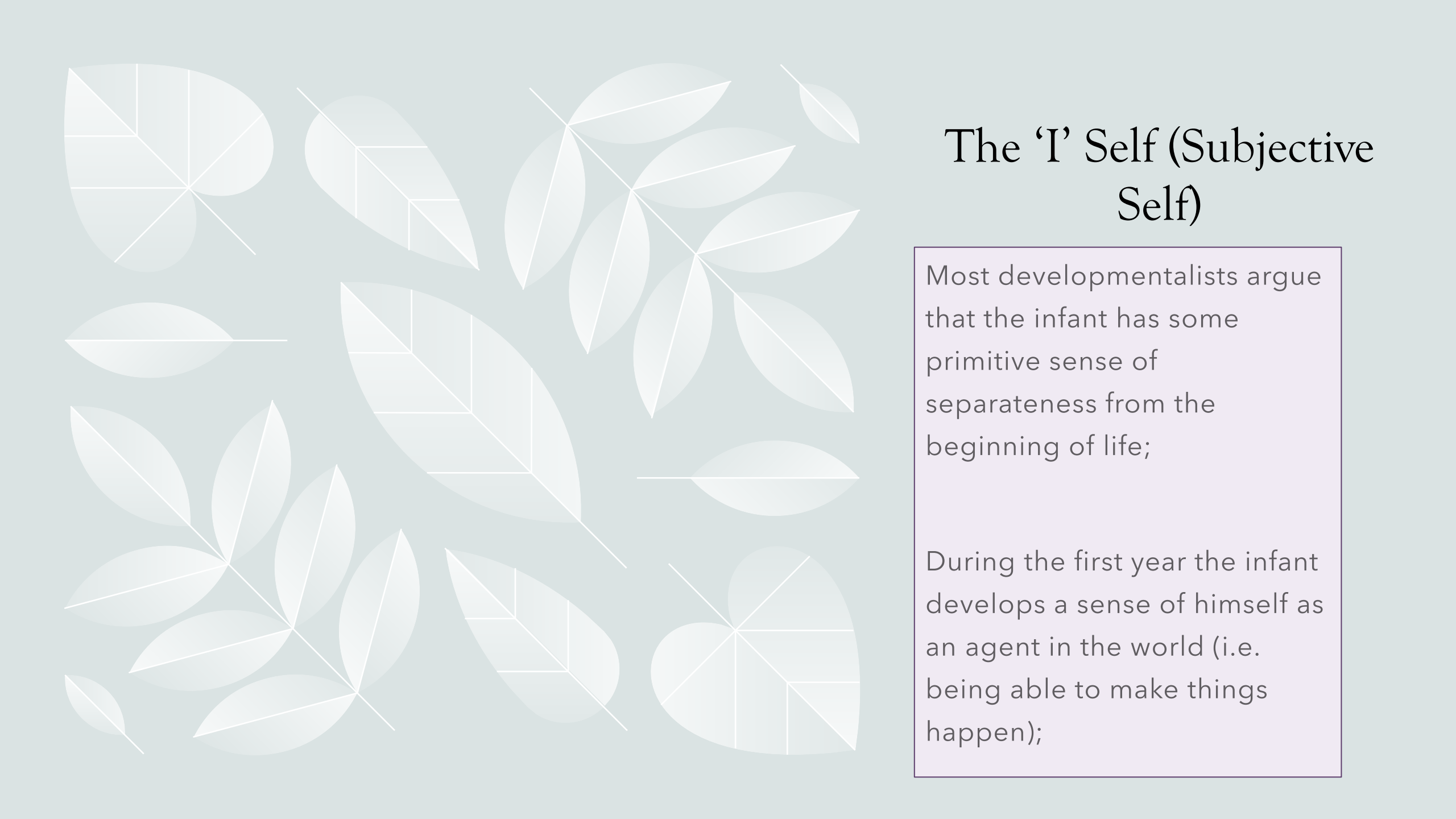
The Concept of Self



The '*I*' self (subjective self)
– involves awareness of the '*I*', the self that is separate from others



The '*me*' self (objective self) – involves awareness of the self as an object with properties

The background of the slide is a light gray color. On the left side, there is a decorative pattern of stylized leaves. These leaves are white with thin white outlines and are arranged in a way that they appear to be floating or growing. Some leaves are simple ovals, while others are more complex, with multiple leaflets branching from a central point. The leaves are scattered across the left half of the slide, creating a naturalistic yet minimalist aesthetic.

The 'I' Self (Subjective Self)

Most developmentalists argue that the infant has some primitive sense of separateness from the beginning of life;

During the first year the infant develops a sense of himself as an agent in the world (i.e. being able to make things happen);

The 'Me' Self (Objective Self)

- The infant comes to understand that he/she is also an object in the world, and that just as an object has properties, so does the self have properties;
- Infants as young as 4 months respond differently to live video or still photographic images of themselves and others;
- Self-recognition in a mirror/self-reference by name when shown a picture of themselves, emerge by about the middle of the second year;
- The understanding that the 'me' self extends over time does not emerge for at least another year

Leary (2004)

- The `self`
- It is a motivational cognitive structure that allows self-reflection and the ability to organise information about the self.
- It motivates –
 - Self consistency to maintain a view of the world,
 - Self-evaluation to enable an accurate view of themselves,
 - Self enhancement to maintain a positive image

As a result, it relates closely to our self-esteem.

Leary (2004)

- We have two views of our self, the private view and the public view.
- The private view is described above, and the public view is:
 - Our projected image
 - Our beliefs about how others see us
 - The actual impression that others hold about us.

Components of the self

- Self-image (public view)
- Self esteem (evaluative function)
- Ideal self (what we would like to be)
- **Four factors that affect the development of the self (Argyle, 1983):**
 - The reaction of others
 - Comparison with others
 - Social roles
 - identity

Developmental stage (Maccoby 1980)

- Babies begin to develop an understanding of the self when they realise that if they bite their fingers it hurts!
- They recognise their bodily self by movement of their limbs, the sounds of their cries, but at a basic level.
- Object permanence is related to the development of self recognition, for example the `rouge` test demonstrates that it emerges around 18 months (Lewis & Brooks-Gunn, 1979).
- The `sticker` study (Povinelli, 1998) however shows that whilst they can recognise themselves in a video by appearance, they cannot understand that it is actually them, as they are grounded in the here and now. They do not achieve full self recognition and **self understanding** until around four.

Self Understanding

- With development, self-understanding shows:

1. An increasing use of psychological concepts

2. A stronger belief in the self's agency and volitional power

3. A tendency toward integration of the disparate aspects of self into an internally consistent construct system.

Self Understanding

- Damon & Hart (1982) described the following developmental levels of self-understanding:

Infancy and early childhood - bodily properties or material possessions

Middle and late childhood - capabilities relative to others

Early adolescence - social-personality characteristics

Late adolescence - belief systems, personal philosophy

Self Understanding

- Rosenberg (1979) questioned children about points of pride. It was found that personality characteristics were mentioned by:
 - 9% 8 yr. olds
 - 17% 14 yr. olds
 - 28% 16 yr. Olds
- When asked about their hoped-for "future self", personality characteristics were mentioned by:
 - 36% 8 yr. olds
 - 69% 14 to 16 yr. olds

Self Understanding

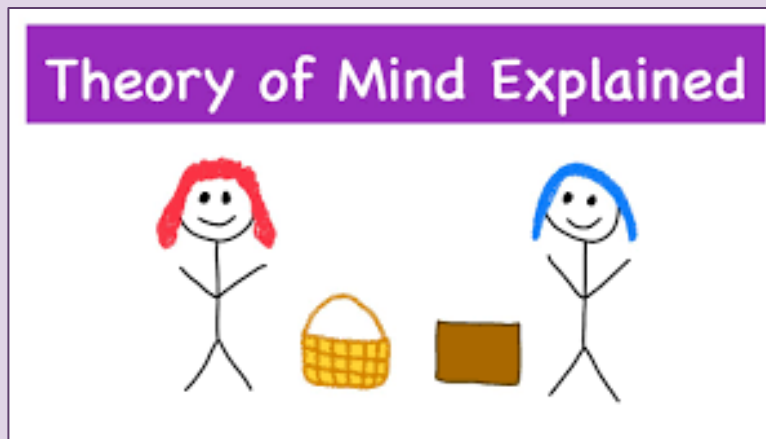
- When asked who knew their “exterior self” the best (themselves or others):
 - 50% older children said themselves
 - 15% younger children said themselves
- When asked about who knew their “interior self” the best (themselves or others):
 - 70% older children said themselves
 - 50% younger children said themselves

The Inner Self: Young Children's Theory of Mind



An Understanding of the Mind

- Having an understanding that other people have desires, beliefs, thoughts, feelings and their own interpretation of the world is often referred to as having a '*theory of mind*'.



What does it mean to have an understanding of mind?

- **We understand:**

1. that we have emotions, feelings and desires, and;
2. that desires and feelings are related.

- **We realize:**

1. that the mind includes knowledge;
2. that we can think about information;
3. that there is a difference between thoughts and real things;
4. that we have beliefs about the state of the world.

Understanding the Mind

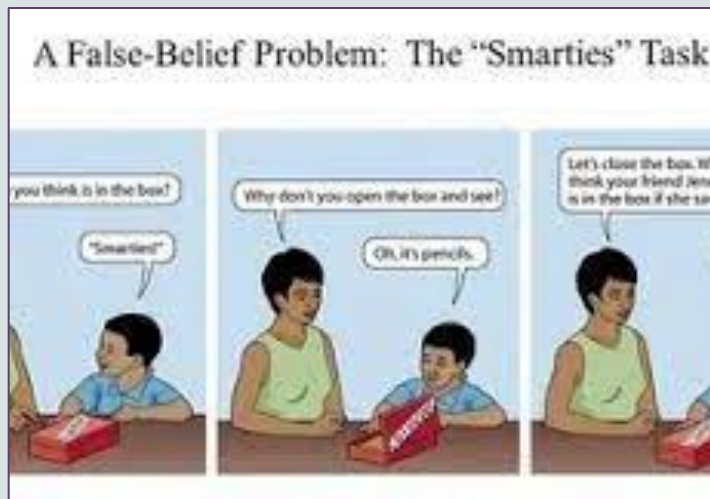
- One of the most important aspects of understanding the mind is the realization that just as we have a mind, so do other people;
- Another important realization is that other people may have beliefs that differ from our own. Additionally, people can be deceptive and can lie. What is in our heads is not necessarily what we say.



Origin of 'Theory of Mind' Research

- Research on 'theory of mind' was initiated by Premack and Woodruff (1978) in the context of determining the cognitive and language abilities of chimpanzees;
- According to Premack and Woodruff (1978): *"an individual has a theory of mind if he imputes mental states to himself and others"* (p.515).
- **Evidence -**
- Byrne and Whiten (1987) argued that there is some evidence that chimpanzees are capable of displaying deliberately deceptive behaviour.
- <http://www.youtube.com/watch?v=BmISd0v7AdM>

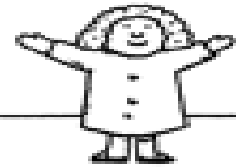
Tasks for assessing 'theory of mind' abilities



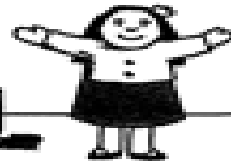
- **False-belief and other related tasks**
 1. Mistaken location
 2. Mistaken contents
 3. Appearance/reality
 4. Second-order false-belief

'Mistaken Location' Tasks

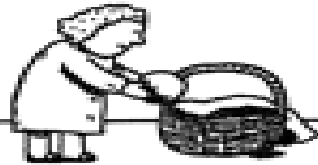
- The standard version involves the unexpected transfer of a desired object, so that the central character then has a false belief about the location of that object. To assess children's understanding of the character's false-belief, they are asked to predict where the character will look for the object
- (e.g. the Maxi task (Wimmer & Perner, 1983; the Sally-Anne task (Baron-Cohen, Leslie & Frith, 1985).



this is Sally



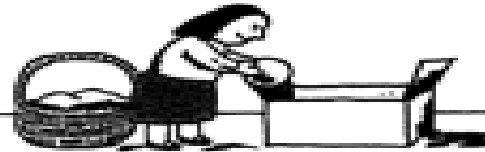
this is Anne



Sally puts her ball in the basket



Sally goes away



Anne moves the ball to her box



where will Sally look for her ball?

'Mistaken Contents' Tasks and 'Appearance/Reality' Tasks

- Children are shown a typical container (e.g. a Smarties box). They are asked about the content of the box (practically all children say 'Smarties'). The real content (pencils) is then revealed and children are asked what another child, who has not seen inside the box, will think is inside (e.g. Perner, Leekam & Wimmer, 1987).
- The Appearance reality task involves two questions about, for example, a trick object, such as a sponge that looks like a rock; (1) an appearance question "What does this look like?", and (2) a reality question "What is this really?" (e.g. Flavell, Green and Flavell, 1986).
- <http://www.youtube.com/watch?v=OEpu3dC5W70>
- <http://www.youtube.com/watch?v=B4lv5FnBBh0>

'Second-Order' False Belief Tasks

- Children are told a story about two characters (John and Mary). Mary is going home while an object is transferred from location A to location B. John watches the transfer but is not told that Mary independently finds out that the object has been transferred to location B. The test question is: "Where does John think that Mary will look for the object?" (Perner & Wimmer, 1985).
- Results - The typical developmental trend is that at age 3 years old, almost all typically developing children answer incorrectly, whereas most typically developing children of 4 years and older answer correctly.

When is 'theory of mind' achieved?

- Most typically developing children succeed on typical false-belief tasks by the age of 4. However, there is some evidence to suggest that younger children can succeed on false-belief tasks if the wording is made more specific (e.g. Lewis & Osborne, 1990; Siegal & Beattie, 1991).
- Individual differences exist. These differences may reflect differences in language ability; interactions/conversations with adults/older siblings (e.g. Brown et al. 1996; Dunn, 1999; Jenkins & Astington, 1996; Lewis et al. 1996).

Children with Autism

- Autism was first described by Kanner (1943) and Asperger (1944)
- Contemporary diagnosis of individuals with autism is based on the criteria described in DSM-5 (the Diagnostic and Statistical manual of Mental Disorders, 5th Ed.). The DSM criteria include three fundamental impairments:
 1. Qualitative impairments in social interaction;
 2. Qualitative impairments in communication;
 3. Restricted, repetitive and stereotyped patterns of behaviour, interests and activities.

‘Theory of Mind’ and Autism

- Baron-Cohen et al. (1985) discovered that children with autism show serious delays in their acquisition of theory of mind’.
- In his research, most of the typically developing and Down Syndrome children passed, but all but a few of the children with autism failed, despite having a much higher mental age than the other children.

The 'Picture Stories' Experiment (Baron-Cohen, Leslie and Frith, 1984).

- Children were shown sets of 4 pictures, each of which made a story (mechanical, behavioural and intentional);
- Pictures were shown in a mixed-up order and children were asked (i) to put them in an appropriate sequence and
- (ii) to tell the story in their own words;
- Children with autism performed poorly on the intentional stories but not on the mechanical or behavioural ones.

Results

- Mechanical: person and object. Autistic children performed best of all groups.
- Behavioural: person to person. Autistic children and neurotypical's performed similarly.
- Intentional: inferring a cause to behaviour. Autistic children performed significantly worse than the other two groups.
- On the basis of these findings, Baron-Cohen et al. (1985) argued that children with autism fail 'theory of mind' tasks due to an abnormal neurological impairment specific to autism.

Influences on Theory of Mind Development in Typically Developing Children

- Language ability (e.g. Jenkins and Astington, 1996; deVilliers & de Villiers, 2000; Hale & Tager-Flusberg, 2003).
- Cognitive abilities (e.g. Carlson & Moses, 2001).
- Pretend play (Harris & Leivers, 2000; Astington & Jenkins, 1995).
- Security of Attachment/Maternal "mind mindedness" (e.g. Meins et al. 1998, 2002, 2003;
- Social interaction: Siblings (e.g. Jenkins et al. 2003; Peterson, 2001; Hughes & Dunn, 1998).

The development of Self-concept

- The Theory of Mind Linked to the development of self-concept (ToM; Baron-Cohen, 1993)
- This is believed to be the psychological self which is evident around ages 3-4.
- Children are also able to refer to their categorical self, e.g. by age or gender.



The self in pre-schoolers

- Self-concept – How we think about or describe ourselves.
- Initiative vs. guilt.
- Erikson's 3rd stage of psychosocial development.
- Beginning of autobiographical memory.
- Young children have very high self-esteem.
- Inability to use social comparison.



The self concept in middle childhood

- The self-concept now includes:
- Psychological terms, emotions and attitudes.

"I am a good friend. I like new things."

- Less all-or-nothing, more shades of grey
- "I get sad if there is no one to do things with."*

- Industry vs. Inferiority
- Erikson's 4th stage of psychosocial development.*

- More use of social comparison

"I am better than Joe at arithmetic but not as good as Arina at reading."

The self concept and identity in adolescence

- The self-concept and identity:
- Hall (1904) Storm & Stress, however, Erikson (1968) – Identity Crisis; **Personal Crisis**
- Adolescents are experiencing a `moratorium, a delay in reaching adulthood where they experience role confusion. This role confusion affects:
 - Intimacy (fear of losing their identity)
 - Time perspective (anxiety about change affects ability to plan for the future)
 - Negative identity (delinquent behaviour to resolve the crisis)

Marcia (1980)

- Expanded Erikson`s theory to include four identity statuses:
- In males by the time they are 24 they have reached identity achievement and very few experience moratorium, however the theory was less supported when applied to females.

		Crisis	
Commitment:		High	Low
	High	Identity achievement	Foreclosure
	Low	Moratorium	Confusion/diffusion

Gender; development and identity



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Sex vs. Gender

Generally, the term **gender** is used to refer to learned or socially constructed categories (feminine and masculine) in contrast to **sex** which is used to refer to biological categories (male and female).



Terminology

- Sex - Our biological make-up - sexual identity - are we biologically male or female?
- Gender - The cultural interpretation of sex.
- Gender identity - Do we consider ourselves to be male or female? Psychological concept referring to the inferences we make about being male or female.
- Gender roles - Behaviours, interests, attitudes, skills and personality traits that a culture considers appropriate for males and females.
- Gender-typing - Process by which children learn and acquire gender roles.
- Gender stereotyping - Preconceived generalisations about male and female behaviour.

Gender Development

According to **Shepherd-Look (1982)**, most children go through at least 3 steps in gender development:

1. They develop beliefs about **gender identity** (about 3 years a basic understanding)
2. They develop **gender preferences** (dominated by physical appearance, do not realise that boys become men)
3. They acquire **gender constancy** (gender is immutable -related to conservation ability)

All three aspects of gender contribute to a child's general knowledge of a **gender-role standard**

Gender Differences in the Expression of Emotion



- Girls more emotional than boys.
- By the toddler/preschool years boys tend to display more anger than girls.
- Girls exhibit more fear, distress and embarrassment than boys.
- Infants' displays of emotions serve a communicative function that affect the behaviour of parents/caregivers.
- Emotions undergo changes in the early months and years of life.
- Children's understanding and self-regulation of emotion improve as a function of age.
- Girls and boys differ in their expression of emotion, thought to be due to socialization in the family and culture.

A Cross-Cultural Survey of Some Sex Differences in Socialization

Barry, Bacon & Child (1957), Journal of Abnormal and Social

Psychology, 55, 327-332, studied the socialization practices of 110 cultures (mostly non-literate), focusing on the following five attributes: nurturance, obedience, responsibility, achievement and self-reliance.

They found a widespread pattern of greater pressure toward nurturance, obedience and responsibility in girls, and toward self-reliance and achievement-striving in boys.

Gender and play

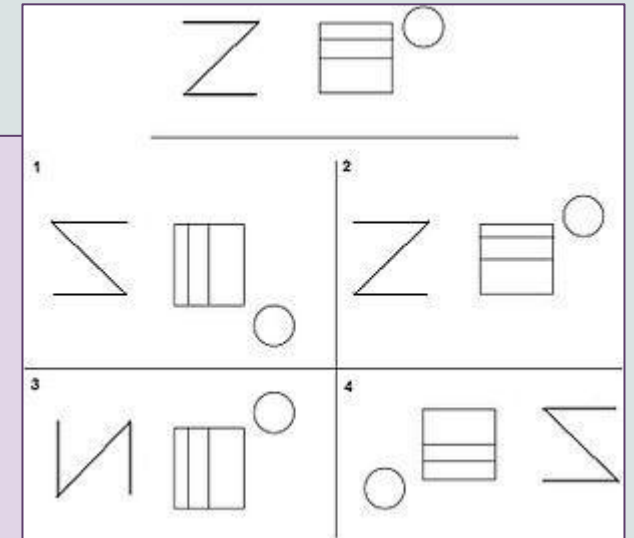
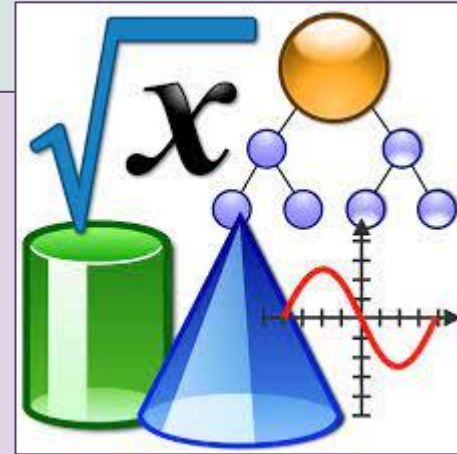


- Gender segregation - A preference for playing with other children of the same gender.
- Strongest in middle childhood.
- Most likely to happen when there are many other children to play with.
- One explanation: Different styles of play.
 - Boys - competition and dominance.*
 - Girls - self-disclosure and agreement.*
- Another explanation: Different communication styles.

Documented psychological differences between the sexes

- Verbal ability
- Visual/spatial abilities
- Mathematical ability
- Aggression
- Activity level
- Fear, timidity, risk taking
- Emotional expressivity
- Compliance
- Developmental vulnerability

(Eaton & Enns, 1986; Feingold, 1994; Halpern, 1997; Maccoby & Jacklin, 1974; Ruble & Martin, 1998).



Sex Differences: A Study of the Eye of the Beholder

Condry and Condry(1976), Child Development,47, 812-819.

Participants

204 college students aged 18-25.

Procedure

Subjects were asked to rate the emotional behaviour of an infant who was introduced as either a girl (Dana) or a boy (David), as the child played with toys (teddy bear, jack in the box, doll, buzzer).

Results

The resulting impressions of the infant's behaviour clearly depended on his or her presumed sex: eg. A strong reaction to the jack in the box was labelled 'anger' when the child was presumed to be a boy and 'fear' when the child had been introduced as a girl.

Sex Role Concepts of Two and Three Year Olds

Kuhn, Nash and Brucken (1978), Child Development, 49, 445-451.

Participants

72, 2 and 3 year olds

Procedure

The children's task was to select which of two paper dolls, one male and one female, made the statement involving traits (I'm strong), activities (I like to play ball), or future roles (When I grow up, I'll fly an aeroplane).

Results

The results clearly demonstrated that children as young as 2 years of age possess substantial knowledge of sex role stereotypes prevailing in the adult culture.

Sex Differences in Parent and Infant Behaviour in the Home

Smith and Daglish (1977), Child Development, 48, 1250-1254.

Observations were made in the homes of 32 families, each with a child aged 12-24 months. 16 of the children were boys, 16 were girls. Boys showed more active play, play with transportation toys, and play generally forbidden by parents.

Girls played more with soft toys and dolls. On questionnaire responses, many parents rated these and other behaviours as sex appropriate.

The Emergence of Same-Sex Affiliative Preferences Among Preschool Peers

La Freniere, Strayer and Gauthier (1984) Child Development, 55, 1958-1965.

Participants

193 children (98 girls, 95 boys) ranging in age from 1 to 6 years.

Procedure

Longitudinal observations over 3 years in day care centre

Results

1. Older children exhibited stronger preferences for same-sex social partners than younger children;
2. Girls began to prefer same-sex peers earlier than boys, who subsequently surpassed girls in sexual discrimination.

Children's Reasoning Regarding Sex-Typed Toy Choices

Eisenberg, Murray and Hite (1982), *Child Development*, 53, 81-86.

Participants

68, 3 and 4 year olds

Procedure

Phase 1: Observations during free play time

Phase 2: Interviews to determine which of a predetermined set of sex-typed toys the children thought that they themselves, another boy and another girl would like and dislike, and also their reasoning for each choice.

Results

Children used considerable amounts of sex-role oriented thinking to justify their answers regarding other children's likes and dislikes, but less to justify decisions regarding their own toy preferences (especially their likes).



Explanations of gender role acquisition

- **Biological explanations** involve the control of sex-typical behaviour through maturational processes, resulting from genetic inheritance and, in the long term, evolutionary history;
- **Socialization explanations** involve the internalization of cultural values through social learning.

Biological Explanations

- Sex differences in behaviour are apparent from birth.
- Infants enter world with some predispositions to 'masculinity' and 'femininity' due to exposure to hormones in the womb.
- Some sex differences could be attributed to different distributions of sex hormones between males and females (eg. Males might be more aggressive than females because of their higher levels of androgen and testosterone; studies of androgenized girls Money and Ehrhardt, 1972).

Nevertheless, according to Maccoby and Jacklin (1980), higher concentrations of male sex hormones may be either a cause or effect of aggressive behaviour.

Evidence for a biological basis?

- Batista family (Imperato-McGinley et al, 1974).
- Dominican Republic - Single family - 10 children - 4 grew up as girls but developed into muscular men.
- Twenty-three affected families (37 children in total). Common female ancestor (mid-18th century).
- Occurs only when mutant gene carried by both parents.
- A Late flood of testosterone produces dihydrotestosterone (for male appearance).
- At age 12 - vaginas healed over, they grew full-sized penises and testicles.
- Behaviour changed to match that of boys in Dominican Republic.
- Suggests that testosterone had pre-programmed masculinity into their brains.

Male or female brains hardwired?

- Baron-Cohen (2003a, 2003b)

Female brain - empathy/sensitivity

Male brain - understanding and building systems

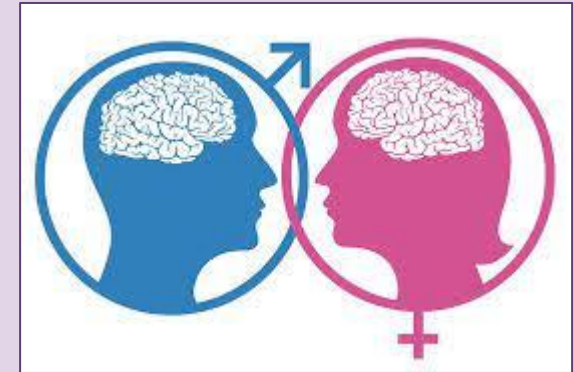
- Three common brain types:

1. *Empathising stronger than systemising (E)*

2. *Systemising stronger than empathising (S)*

3. *Equally strong in both empathising and systemising (balanced brain, type B)*

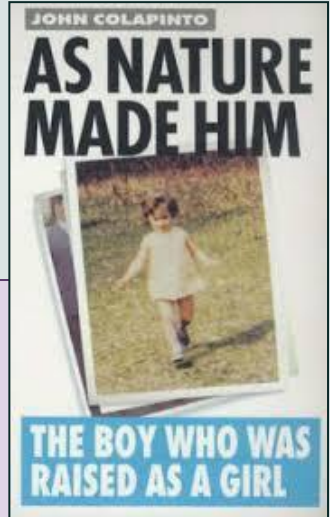
- Some evidence that girls show more empathy than boys, while boys are more interested in how objects work.
- Men better at map reading and mental rotation (Golombok and Fivush, 1994).



Socio-Biological view

- Men and women are the product of a complex system of factors and forces which combine in various ways to produce a whole range of masculinities and femininities (Gross, 2010).
- Interaction between biological and social factors is important
- Money and Ehrhardt (1972) Anatomy is destiny.
- How we are labelled sexually determines how we are raised 'Male' and 'female' brain?
Incongruent with biological sex?
- **Remember** - Schaffer (2004) 'Baby X' studies - 'David' or 'Dana' - neither overtly masculine or feminine in appearance.
- Played with range of toys - when cried in response to jack-in-the box - it was labelled as either anger or fear.

Money & Ehrhardt (1972)



- **Intersex studies (natural experiment)**

Gender of rearing different from their chromosomal/anatomical/hormonal (CAH) gender status e.g. genitals not sufficiently male or female.

Claim that gender of rearing can be changed if within 'critical' period (21/2 - 3 years)

Cite penile destruction cases - BUT these demonstrate varying outcomes

- **Well-known case - Twin Bruce Reimer - accidental penile destruction during circumcision**

- **Surgically reassigned, raised as girl 'Brenda'**

By 14 - changed name to 'John' - surgical penis construction

1997 - age 31 - married and named David Reimer

2004 - age 38 - suicide

Gender Identity- Behavioural and Social Learning Theory

- Behaviourism's central concept - reinforcement of proper behaviours, punishment of improper ones.

Most parents reinforce sex-typed play and chores.

*How would this boy's
parents and peers react to his
playing with dolls?*

- Social Learning Theory

*Children learn gender-appropriate
behaviours by observing those
around them.*

Examples in media?



Social Learning Explanations



According to social learning theorists (e.g. Bandura (1977) and Mischel (1970), children acquire their gender identities and gender role preferences in two ways:

1. Through direct tuition, or differential reinforcement;
2. Through observational learning.

SLT continued...

- Culturally determined - e.g. Kwoma tribe (Papua New Guinea) - large, strong women able to carry heavy loads considered highly desirable by men (Whiting, 1941).
- For most men in the Western world....not so much.
- Socializing agents within each culture - repetitive messages.
- Self-regulation - Learns from others' responses to regulate own behaviour according to gender.
- Role of parenting and same sex role models...



Peer influences

- Peer influences.
- Children hold 'gendered' ideas.
- (Ruble and Martin, 1998)
By 3 years - gender appropriateness
By 4 years - policing each other
But - must be linked to cognitive development
- 'Gender appropriateness' - is therefore fluid, changing and cultural.

Sex-Child Differences in Father-Child Interaction at One Year of Age

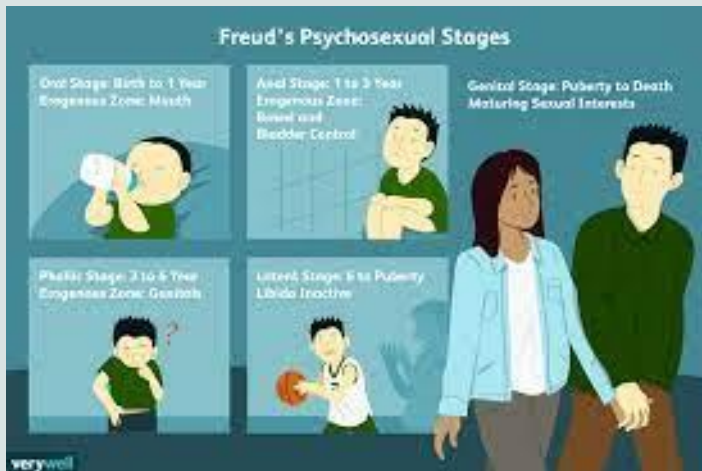
Snow, Jacklin and Maccoby (1983), *Child Development*, 54, 227-232.

107 father-child dyads were observed for differences in the behaviour of fathers towards their sons and daughters, as well as differences in the behaviour of the children in the presence of their fathers.

Findings

By 12 months of age, boys and girls differed in how they behaved in their fathers' presence, and fathers differed in how they treated sons and daughters.

Freud's Psychoanalytic Theory



- "Biology is destiny"
- Gender differences in attitudes and behaviour originate from children's identification with their same-sex parent.
- Young children experience intense sexual desires during the phallic stage.
- Coping with childhood sexual desires is the path to the development of the superego.

Gender Identity- Cognitive Developmental Theory

- Kohlberg (1966) - a child's understanding of gender goes through stages based on cognitive development.

Gender Identity (2 yrs) - "I am a girl, you are a boy."

Still relies on external appearance

Gender Stability (3 yrs) - "I am a boy and will always be a boy."

Still confused by non-gender-typical behaviour.

Gender Constancy (5 yrs) - "A boy will always be a boy, no matter how they act."

Cognitive Developmental perspective

- Gender Schematic Processing theory (Martin and Halverson, 1981)
Emphasises the child's active processing of gender-related information
Diverges from Kohlberg in a crucial respect:
Argues that child does strive to develop an increasingly complex schema about their gender group (values, behaviours etc.)
- BUT - this starts when child discovers their own gender identity - not when they obtain gender constancy
Child's self-perception becomes sex-typed
Focus on activities identified as sex-group appropriate/less attention to other activities
Helps explain resilience of children's sex role beliefs and attitudes
Process information schematically (admit or ignore information) - congruent information supports/strengthens schema

Gender Identity- Gender Schema Theory

- It's easier to navigate social relationships by categorizing people as "boy" or "girl."
- Sandra Bem - Gender development doesn't follow stages.
- It comes from within our particular society.
- How would you describe this child-
Strong, or nurturing?



Summary

- Gender is a critical social variable;
- People attach values to other people according to their gender;
- Stereotypes about gender differences are widely shared through most communities;
- Biological explanations make an important contribution by attempting to locate gender-role differences in historical-evolutionary context;
- Social learning theory maintains the importance of the social environment and emphasizes the importance of observational and modelling processes.

