

Normal behaviours vary with age

- Development – the sequence of physical and psychological changes that human beings undergo as they grow older.
- Developmental Psychology – the scientific study of age-related changes in behaviour, thinking, emotion, and personality.

The Big Questions in Developmental Psychology - not examinable

### 1. Continuity and Change

To what extent is development characterised by continuous change, and to what extent does it involve discontinuities that result in the emergence of new forms and processes of change?

- Are we as human beings distinctive from other species?
- Is individual development continuous?
- Are there critical periods in development?

### 2. Sources of Development

Is development guided primarily by the genetic programme locked in to the body's cells, or is the external environment the driving force that produces change?

- Nature versus Nurture debate

### 3. Individual Differences

No two human beings are exactly alike. How do people come to have stable characteristics that differentiate them from all other people?

- What makes individuals different from each other?
- To what extent are individual characteristics stable over time?

Data Collection in Developmental Psychology

- Self-Report: structured question on own development- questionnaire/ answering on your own traits. Can't really use for children as they don't have the capabilities to express their emotional states. Get social desirability- people respond in ways they think you want them to respond.
- Observation: just watch the children. Tend to use natural environments now to see the behaviour in their 'natural' state.
- Experimental Methods : introducing a change to an environment to see the results e.g. Rouge test of self recognition

- Clinical Interview Methods: psychologist with patient. Depending on your answer to one question, the following questions will go in a different direction. Tricky to do with children

## Research Design

- Longitudinal Design:
  - Taking the same people and observing over time.
  - Can have cohort effect: something about group doesn't translate due to development or cause they've done it before.
  - Very expensive, long time to get data, practise effect.
  - When to test them?
- Cross-Sectional Design
  - Different groups of people e.g. 1 group 6 month olds, 1 group 9 month olds
  - What groups do we get?

## Lecture 2: Cognitive Development

8<sup>th</sup> July

### What is Cognition?

- Cognitive development basically means intellectual growth
- Cognitive processes are those by which we get to know ourselves and our world: memory, learning, attention, perception and interpretation, thought and problem solving

### The Father of Cognitive Development: Jean Piaget (1896-1980)

- Observed children
- Proposed a sequence of development that all 'normal' children follow; consistencies in time of the development. The children would succeed and struggle at the same things at the same time
- Four 'stages' of cognitive development; this model shows a discontinuous development

### Sensorimotor Stage:

- Birth to 2 years
- Cognition is closely tied to external stimulation; babies don't sit around thinking about things. Their cognition is based on their interactions with others/ what happens to them. The learning is often more tactile.
- "Thinking is doing" (cognition consists entirely of behaviour)- there is no pre-thought of the consequences their actions may have
- Object permanence- the idea that objects do not cease to exist when they are out of sight. Separation anxiety in children will not occur until they have achieved this, as a child must recognize that their parent still 'exists' when they leave their vicinity to have these problems
  - Birth- 3 months: look at visual stimuli, turn head towards noise
  - 3 months: follow moving objects with eyes (tracking), they will often stare where an object has disappeared from, but will not search for the object.

- 5 months: grasp and manipulate objects, anticipate future position of object, this suggests they grasp object permanence
- 8 months: searches for hidden object at the last place they found it rather than the last place they saw it- 'A not B effect.' Will look in spot 'A' where the object was repeatedly hidden not 'B' where they have observed you hide the object
- 12 months: will search in the last place they saw the object
- Schema Formation- a schema is a mental representation of set of rules that defines a particular behaviour category. It helps us to understand current and future experiences.
  - 'Blueprint' for what generally happens e.g. things that are edible. Develops over time e.g. at different ages will respond to a question like 'what happens at a birthday party?' differently.
  - 'Twin engines' for schema formation: assimilation and accommodation
  - Assimilation: the process by which new information is modified to fit in with an existing schema e.g. a child many know that cats and dogs are animals, will see a rabbit and call it a dog, to fit it within the child's schema.
  - Accommodation: the process by which an existing schema is modified or changed by a new experience e.g. calls the rabbit a rabbit after being repeatedly told it's a rabbit, now know that animals are cats, dogs and rabbits
- Representational Thought: the ability to form mental representations of others behaviour (visualisation).
  - Occurs towards the end of the sensorimotor period
  - Mental representation is instrumental in:
    - Imitation: imitating things that are currently happening to the child e.g. you are clapping so they clap
    - Deferred imitation: a child's ability to imitate the actions he or she has observed others perform in the past
    - Symbolic play: using an object to represent something else in a play situation e.g. using a block as a phone
    - The use of words to represent objects: knowing that words match up with objects, around 18 months there is a large jump in language

#### Preoperational Stage:

- 2 to 7 years
- Ability to think logically as well as symbolically
- Rapid development of language ability- big increase in vocabulary
- Classification and categorisation, counting of objects
- Object Manipulation
- Two main 'obstacles' the child must overcome to move onto the next stage"
  - The failure of Conservation: the understanding that specific properties of objects (height, weight, volume, number) remain the same despite apparent changes or arrangement of those objects. E.g. two identical glasses of water with the exact same amount of liquid, one is poured into a thinner, taller glass- children will often say the new glass has more water
  - Egocentrism: a child's belief that others see the world in precisely the same way that he or she does

### Concrete Operations Stage:

- 7 to 12 years
- Ability to perform logical analysis e.g.  $4=\text{even}$ ,  $4+1=\text{odd}$ , but can't be hypothetical and say that any even number + 1= and odd number
- Ability to empathise with the thoughts/ feelings of others: understand some people see things differently, which was a major 'obstacle' for the preoperational stage
- Understanding of complex cause-effect relations: will understand a change in one dimension has a corresponding change in another dimension

### Formal Operations Stage:

- 12 years upward
- Abstract reasoning: can entertain the hypothetical
- Metacognition: thinking about own thought process
- Dependent on exposure to principles of scientific thinking: due to this Piaget said you may not necessarily reach this stage

### Lecture 3: Cognitive Development Continued

10<sup>th</sup> July

#### Evaluating Piaget's Theory:

- Piaget's theories have had an enormous impact on our thinking about children's intellectual growth. But did Piaget have it right?
- His stages are strikingly reliable, and often do happen in that order, at the same ages.
- Most criticisms assert that Piaget underestimated children's abilities at various ages. There are two main criticisms

#### Criticism 1- Babies don't seem to start with nothing:

- Piaget didn't give credit for what kid's could do from the start
- Space and Objects- awareness of the space around them
  - The Visual Cliff: kid's willingness to cross the boundary ~6 months kids can often perceive depth
  - The Effect of Occlusion: Covering objects
  - Habituation procedure. Based on the concept that babies will look at things that are new to them, or that looks odd. Their acknowledgment that two objects can't exist in the exact same place at the exact same time
  - Understanding Support- how objects must be placed and balanced in order for them to stay in the same place
  - Object Permanence: around 8 months the A not B effect occurs, but the child will often being looking at B while reaching for A. This suggests that the error may be the baby's motor control not the child's understanding of object permanence.
- Number: primitive building blocks for numbers are present from early on. Habituation in this situation, the babies will naturally look at something of a different number than the original object, as they find that new/ odd.
- Social Cognition: requires some learning, but you are born with the building blocks for it, such as baby's wanting to look at people.

- Newborns will still try to imitate facial expressions, and while they don't have the greatest control of their facial muscles, they will still try.
- Rudimentary idea that people can see something that the child can't, around 9 months if a parent is holding the baby, and cranes their head to look at something, the child will also try to look at what the parent is looking at.
- Babies seem to understand that humans have intentions (such as a human hand reaching for an object) but not inanimate objects (such as a claw reaching for the same object)

#### Criticism 2- Cognitive development isn't an all-or-nothing phenomenon

- Piaget felt that this was more of a discontinuous development, but research suggests some parts are actually continuous development.
- Numerical skills in preschoolers
  - Counting: children understand the concept of counting, while they may not be actually able to logically count.
  - Numerical reasoning: tasks that require asking the same question twice (such as if two rows of objects have the same number, then changing the spacing and asking again) children will often change their answer, as they are aware of the adults status, and don't want to be wrong.
- Social cognition in preschoolers
  - Theory of mind: understanding the existence of other people's minds separately to theirs.
  - Egocentrism
  - Intentions: children's understanding that other people like and dislike other things than they do
  - True and false beliefs: to understand that others believe things other than what the child believes, when the child has information about something the other person doesn't.

#### How does Cognitive Development Occur?

##### 1. The Role of Biology

- Genetic similarities are reflected in ability: identical twins seem to have similar abilities
- Certain cognitive capacities seem to be tied to certain neural structures: people with the same atypical neural problem tend to have the same cognitive issues
- Certain cognitive capacities appear too early to be learned: e.g. newborns want to look at faces, not just scrambled features. Also will display the same type of facial expressions as us for the same emotion e.g. if something is sour

##### 2. The Role of Culture

- Cultural differences in competence: Piaget studied western, first world kids, is the pattern different across other cultures? E.g. isolated cultures may pass Piaget's stages later in life, or not at all
- Cultural context of testing
- Social and cultural influences on development

- The interaction of culture and biology: we learn what is passed onto us. Biology is ensuring what is passed on through evolution. E.g. physically predisposed to be a good runner, so will be placed in situations to nurture that ability.
- The child's role in shaping the impact of culture: three 'zones' of a child's learning, what they can do, what they can't do, and what they can do with an adults help. Vygotsky said adults should focus on this zone, to develop what the child can do. Often an adult undertakes 'scaffolding' of a conversation, many prompts to draw information out of the child, as the child gets older the parent will have to scaffold the conversation less.

## Lecture 4: Social and Moral Development

13<sup>th</sup> July

### What is Social Development?

- Forming bonds with people- first parents, then friends, romantic and business relationships
- Learning to behave in socially acceptable ways
- Learning to be good friends and allies
- Learning to deal with adversaries- bullying ect.

### Attachment Revisited:

- Attachment- "an emotional and social bond between infant and caregiver that spans both time and space" John Bowlby (1969)
- The first social bond the child makes, usually with the primary caregiver
- Measured by the strange situation test
- Not examined in 112

### How is Social Development Achieved?

- Social Learning Theory: we learn to behave by watching how other people behave, and mimicking their actions
- Cognitive Developmental Theory: social development is driven by cognitive development, must be able to understand other people in order to mimic them
- Parents: agents of socialisations. First driver of a child's social actions, through discipline ect.
- Parenting style does show an effect on what happens to the child later in life.



- Principle of Minimal Sufficiency: says that the consequences for an action should be enough to get the child to change their behaviour, but they don't feel forced to do so. Allows for quicker internalization of what is right.

- Parental Style is a two-way street: children's behaviour will affect the parent's style. Parent's aren't consistent with style across their children

- Peer Relationships: around 2 children start choosing friends (quite egocentrically), as they get older they get more discerning

### Emotional Development:

- Understanding other's feelings: happens quite early on, will progress much better once they have a grasp on language → this accelerates the learning, as the parent's can discuss with the child. Theory of mind develops earlier
- Emotional Regulation: which emotions are okay to express and which are not. Babies are reliant on parents for soothing, then develop their own ways e.g. thumb sucking. Again language is important
- Facial expressions appear almost immediately, but they are primary emotions e.g. happy, scared, sad. Other emotions (secondary) require cognitive development e.g. embarrassment, being able to understand what others may think of them

#### Moral Development:

- Moral behaviour- behaviour that conforms to a generally accepted set of rules. In order to behave morally children must understand:
- Not doing wrong: early on children are governed by the consequence "it's wrong because I'll be punished." We want them to have a good internalization of rules
- Doing right: being proactive in a situation, what is going to help the person? Many children show empathetic distress- one kid is sad, so the others become sad too. Initially children will offer what would help them in that situation, then progress to understanding someone may want something else. Also understanding that helping someone may not benefit, and may even hurt you.

#### Kohlberg's Theory of Moral Development:

- Morality develops over time
- Lawrence Kohlberg (1927- 1987)
- Studied boys aged between 10-17 years
- Presented subjects with scenarios- would classify children based on their responses
- E.g. Heinz's wife is dying of cancer, and can be treated only by a medication discovered by a local pharmacist. Heinz cannot afford the price that the pharmacist demands. He breaks into the store and steals the drug. What should Heinz have done and why?
- Preconventional Level: For this level the why is more important than whether you said he should steal or not
  - Behaviour based on external sanctions, such as authority and punishment
  - Stage 1- Morality of punishment and obedience: children obey authority and avoid punishment
  - Stage 2- Morality of naive instrumental hedonism (guided by egocentrism). Behaviour guided by the pleasantness of its consequences to them. "He should steal, because he'll be sad without his wife." "He shouldn't as he won't like jail."
- Conventional Level: Desire to maintain social harmony
  - Includes an understanding that the social system has an interest in people's behaviour
  - Stage 3- Morality of maintaining good relations, consequences for you. Children want to be regarded as good, well-behaved people. "you should steal or your family won't like you
  - Stage 4- Morality of maintaining social order, consequences for society. Laws and moral rules maintain social order and must be obeyed.

- Post Conventional Level: for this level, you had to say that he should steal
  - Moral rules have some underlying principles that apply to all situations and societies
  - Stage 5- Morality of social contracts. Rules are social contracts, not all authority figures are infallible, individual rights can sometimes take precedence over laws. Understanding that sometimes the law is wrong.
  - Stage 6- Morality of Universal Ethical Principles. Rule and laws are justified by abstract ethical values, such as the value of human life and the value of dignity. More about the action behind the decision ~ civil disobedience.
  - Kohlberg said not many people would naturally sit at stage 6

#### Evaluating Kohlberg's Theory:

- Effect of wording changes on response- emphasis on parts of statement will change peoples responses
- Stages may not be coherent entities, but do reflect a progression- generally a blurry progression for kids, but they do fairly reliably pass through these stages
- Cultural and gender biases? Are females are more likely to place emphasis on social, while males on justice? Whether a culture spends lots of face to face time may affect their answers
- Correlation between moral reasoning and moral conduct- would people act how they responded? People who scored lower on this scale were more likely to cheat when given the opportunity in another experiment. Juvenile delinquents are also much more likely to score lower on this scale.

#### Lecture 5: Gender Development

15<sup>th</sup> July

##### Sex versus Gender

- Genetic Sex: What you are genetically, the chromosomes of an individual
- Morphological Sex: the sex organs of an individual, what you look like Almost always the same:
- Gender identity – one's private sense of male or female) ness: what you feel like. In most cases it corresponds to the genetic/ morphological sex (however we know it doesn't always).
- Gender roles – cultural expectations about ways in which men and women should think and behave: Heavily culturally influenced
- Gender stereotypes – beliefs about differences in the behaviours, abilities, and personality traits of males and females.

##### The Development of Gender

- Age 18 months
  - Beginnings of gender-typed preferences: they gravitate toward members of their own gender
- Age 3
  - Knowledge of own gender
  - Preference for different toys and friends of own sex: boys gravitating toward trucks ect and girls toward dolls



- Ability to assign gender to pictures is limited
- Age 5
  - Knowledge of gender constancy: in most cases it doesn't change, now children understand that e.g. cutting the long hair from a girl doll won't make it a boy doll

#### Biological Explanations for Gender Differences

- Exposure of the developing brain to male sex hormones has behavioural effects:
- Gandelman, Vom Saal, & Reinisch (1977) Prenatal exposure to testosterone results in more "male-like" behaviour in females.
  - E.g. aggression, male mating behaviours
- Ward (1972) Males deprived of prenatal testosterone behave more like females.
  - Mating behaviour is more like those of females (submissive)
- Physical aggression in males appears to be biologically predisposed.
  - Often a different in movement in the womb, boys are more active, overall
  - Across cultures small males (children) are more likely to 'rough play'
  - Females are more likely to use relational aggression rather than physical aggression
- The anatomy of the human brain shows some gender differences thought to be due to different patterns of hormone exposure during development.
  - The Wernicke's (input) and Broca's (output) areas of communication are proportionally larger in females
- Gender differences in cognitive ability (e.g., verbal and spatial ability) are at least partly due to differences in the brain.
  - Males appear to have better spatial awareness

#### Testosterone may also play a role in spatial ability

- Males with low testosterone levels
- Females with high testosterone levels
- Testosterone fluctuations during the menstrual cycle
- These suggests biological influence of these factors

Evolutionary Theories – propose that men and women have evolved to behave differently, depending their roles in society

- e.g., primitive women stayed home and did activities that required fine coordination with small, nearby objects. Men hunted and therefore required a greater level of spatial ability.

#### Congenital Adrenal Hyperplasia (CAH)

- Children that are genetically female, but their adrenal gland produces larger than usual amounts of testosterone. If large enough then they will start to resemble males physically- their clitoris may enlarge to resemble a penis, although they still have ovaries. They are more likely to display male attributes
- The more testosterone that is produced, the worse the effects will be.

#### The case of Bruce Reimer

- Was born as one of two identical male twins, around 7 months the twins were having trouble urinating, so their mother took them to get circumcised. Bruce's penis caught fire and was damaged beyond repair.
- Under medical advice (saying sex was not genetic) Bruce was raised as Brenda.
- Brenda had many problems associating with females, and always maintained she was a boy.
- At puberty the parents told Brenda she was born Bruce, and Brenda underwent plastic surgery to go back to being a male.

#### Environmental Explanations for Gender Differences

- Montemayor (1974)
  - 6- and 8-year-old boys and girls invited to play a game. Game labelled as gender-appropriate, gender-neutral, or gender inappropriate.
  - Children found the game more enjoyable if it was labelled as gender- appropriate or neutral.
  - Children's performance was highest when the game was labelled as gender-appropriate and lowest when the game was labelled as gender- inappropriate.
  - This may be motivational, wanting to do well at the boy/ girl game, but not caring about doing well at the game for the opposite gender.

Much gender socialisation begins with a child's parents:

- Morrongiello & Dawber, 1999
  - Examined mothers' and fathers' communications to sons and daughters aged 2-4 years:
    1. During free play: when the kids could do what they wanted on the playground
    2. When teaching a playground safety behaviour
  - Mothers and fathers did not differ in their communications.
  - Sons received more directives ("do this, try this", fewer explanations, and more physical pressure than girls ("bet you can climb this really high").
  - Parents communicate with young children in a way that may promote increased risk-taking by boys and greater perceived injury vulnerability among girls.
  - Girls received less encouragement, and more warnings to be careful
- Smith and Lloyd (1978)
  - Mothers of young infants introduced to a 6-month old infant (not their own baby) and asked to play.
  - Infant's gender label was manipulated (no difference in the infant apart from the parent being told it was a boy or a girl.) so sometimes the baby was introduced as girl, some introduced as boy,
  - Participants behaved differently according to the assigned gender label.
  - Even when there are no differences in appearance or outward behaviour, parents treat children according to gender label.
  - Offered different toys to the child, bounced the 'boy' child more, while the 'girl' child was more likely to be cradled.
- Weisner & Silson-Mitchell (1990)