Developmental theories
Many psychologists have proposed stage theories - they consider the development processes in discrete, qualitatively distinct steps or stages that are reached in a set order.

Piaget's theory of cognitive development
- Jean Piaget: A Swiss biologist and psychologist 1896-1980 became interested in how children think after administering intelligence tests to children and being intrigued by reasoning that led children to give wrong answers
- We build an understanding of our world and develop our thinking through active interaction with our environment which leads us to build concepts or schemas about the world
- Schema: An idea about what something is and how to deal with it (e.g we have schemas ranging from those for chairs/tables to concepts of love and democracy)

- Piaget thought there were two processes which we gain and change our schemas which are:
- Assimilation: We interpret new experiences and information in terms of our current understanding (schemas) (e.g 3 year old have a simple schema for a ball- roughly round and therefore will call a grape or olive a ball because that is his schema 'ball'. His response from his parents would tell him that he needs adjusting)
- Accomodation: Piaget called this his adjustment to fit the particulars of new information

- Piaget's studies also led him to believe that children's thinking changed with age; children progressed gradually through a fixed sequence of four developmental stages that have different characteristics

Stages
- Sensory-motor stage (birth to 2 years)
- Understanding of the world is developed through sensory and motor interactions with it by mouthing, touching, looking and listening
- The child lives in the present and has little understanding that things continue to exist if they are not within sight
- Piaget tested this idea by presenting infants of different ages with an interesting toy then covering it up to see if they would look for it
- Piaget thought that infants had no idea of "object permanence" until approximately 8 months because before this age they did not look for the toy once it has been covered up

- Pre-operational stage (2-7 years)
- Still not able to carry out the mental operations that would allow them to think logically
- e.g 4 year old Susie complained that she did not have enough lemonade- her mother poured her drink from the short wide tumbler that it was in, into a tall thin glass, Susie was now satisfied that she has enough lemonade. She was unable to understand that the quantity of drink had not changed, only its appearance)
- Egocentric: Children can only perceive the world from their own viewpoint (e.g when playing hide and seek they will think that you cannot see them if they cannot see you)
- Piaget used the 3 mountains task to demonstrate egocentrism, the child has to sit on one side of the model and determine what the person sitting on the other side can see
- Until about 6 years, children cannot understand that another person can hold different visual perspective from their own
- egocentrism explains some irritating behaviour, e.g if a child stands between you and the TV they are unaware that you cannot see the TV because they can

- Concrete-operational stage (7-11 years)
- Able to think logically and carry out mental operations with concrete objects, can conserve, can classify

- Conservation: the understanding that an object does not changes its weight, mass, volume or area simply because it changes shape (e.g plasticine exercise)
- Ability to classify: to groups, objects or events by features that they have in common
- Ability to seriate: the ability to order objects with respect to common properties, children start to be able to use mental pictures of objects and events other than having to use concrete materials to help them solve problems

- Formal-operational stage (11 years and above)
- Capable of abstract thinking: thinking that does not rely on being able to see or handle concrete materials in order to reason with them, talk about concepts such as honesty and morality and can discuss possible outcomes of actions without having experienced them
- Logical thinking: individuals develop strategies to work through problems systematically, developing hypothesis and testing them until a solution is found- one test for logical thinking was Piaget's pendulum problem (p.g 226)
- This involved pendulums hanging from string of different lengths and weights. These could be dropped from different heights and pushed with different amounts of force. Children had to work out what factors or combination of factors affected the rate at which the pendulum swung
- A child who has reached the Formal Operational stage would respond to this test by systematically testing the factors to enable them to conclude that it was the length of the string that determined how quickly the pendulum swung
- Piaget thought that social, emotional and moral development all depended on the level of cognitive development that a child had reached
- Critics suggested that Piaget underestimated children's understanding of the world

Piagetian tasks on Indigenous Australians
- Seagrim and Lendon (1980) reported findings of the Hermannsburg project, which compared the cognitive performance of children from Aranda and Loritja people, reared in isolated Lutheran Mission Station in Central Australia with other Aboringal children reared elsewhere and in different circumstances
- Intellectual performance was based on Piagetian tasks and included tests of conservation, classification and of seriation
- Was longitudinal in nature and was conduced between 1965-1978 as well as cross-sectional comparative element to the research, some children were retested over a number of years

- Seagrim concluded that Australian Aboriginal children were as capable as white children in the different types of thinking at similar ages with similar educational experiences
- This was only the case if children had been immersed in the white culture
- Nowadays cross-cultural research in the Piagetian tradition has ceased due to the recognition that formal schooling plays a role in the development of the types of thinking shaped by Piagetian cognitive tasks
- Researchers who have criticised Piaget suggested he:
1) Underestimated young minds
2) failed to distinguish between competence and performance
3) Gave insufficient attention to social influence on performance

Subsequent Research based on Piaget (Donaldson and Siegal)
- Studies that have modified Piaget's tasks so that they involve materials and situations that are common to young children indicate that the children in Piaget's studies may have failed tasks because of the lack of familiarity with the situation rather than because they lacked the cognitive skill required

- Donaldson:
- Martin Hughes (Donaldson 1978) found that children aged between 3.5 and 5 years could take another person's perspective and no longer appeared egocentric when asked to carry out tasks involving hiding a boy doll "so that the police can't see him" (p.g 227)

- Even when Hughes produced a second policeman, making the task more complex, 90% of children could correctly hide the boy from both policeman
- Donaldson argued that young children pass the policeman task and fail the 3 mountain task of Piaget because they are familiar with hiding and so the policeman task makes sense to them
- The 3 mountain task used by Piaget is more abstract and makes little real-world sense to young children
- Another aspect of Piaget's tasks that has been critically examined is the language used

- Michael Siegal (1991)
- Michael Siegal argues that younger children's apparent inability to conserve can be explained by adults breaking the conversational rules that children hold
- Siegal thinks that problems arise when experimenters ask questions where the answer is obvious or repeat questions when an answer has already been given- children are likely to please the examiner so they change their responses (e.g study of the conservation of mass)
- A child may be given 2 balls of play dough and asked if they contain the same amount of dough, one ball is then rolled into a sausage and the child is again asked whether they contain the same amount of dough
- Siegal considers that children are likely to change their answers even if they think the balls still contain the same amount of play dough simply to please the examiner
- Studies have changed the way in which questions are asked, which provided support for Siegal's claim
- Related to this is the question whether Piaget was actually testing children's competence- Piaget assumed that if a child failed a particular cognitive task that she/he lacked the competence
- Educators have been long aware that there are many factors other than competence that can affect whether a person successfully performs a task- Many reasons (e.g to please the examiner, capable of doing the reasoning of the task but unable to explain it) as many of Piaget's tasks rely on verbal responses to questions- lack of skill in verbal expression may mask competence in reasoning

- Piaget placed too little emphasis on how children minds develop through their interaction with others- especially with more competent peers and adults
- Contrast to Lev Vygotsky: Whos central theme was that cognitive growth developed from children's interactions and occurs in a sociocultural context
- Some psychologists considered that Piaget underplayed the role of social and cultural influences
- While research has indicated that Piaget may have been wrong on the ages at which milestones were reached, he was correct in their sequence
- Piaget's emphasis on children as active beings who construct understanding through their interactions with the world has transformed education- his theory still provides a platform for research

Kohlberg's theory of moral development
- Lawrence Kohlberg (1927-1987): There is a universal sequence to the development of morality and the stages begin early in childhood (Kohlberg, 1981)
- He found 6 stages of moral development based on children's responses to various moral dilemmas
- These dilemmas focus on the value of human life and property, the meaning of social rules and laws, value of honesty and importance of upholding contractual agreements with others

6 Stages of moral development
Pre-Conventional
Stage 1-Moral focus: Punishment and obedience, Egocentric
- Content/characteristics: doesn't recognise different points of view, confuses perspective of authority of one's own
- Characteristic of children under the age of 7 since they cannot take the perspective of another person

Stage 2- Moral focus: Individual, instrumental and concrete
- Content/Characteristics: aware of different interests and that these may conflict, instrumental exchange of services, goodwill and fairness
- Judgments appear around age of 7 when exchanges become more common place

Conventional
Stage 3- Moral focus: Mutual interpersonal expectations, conformity and relationships
- Content/characteristics: Following rules, living up to expectations of others, and maintaining trust, gratitude, respect and loyalty

Stage 4- Moral focus: social system and maintenance of one's conscience
- Content/characteristics: Doing ones duty, take the view of the system, obey laws and uphold the social order

Post-Conventional
Stage 5- Moral focus: Rights and social contract
- Content/characteristics: asserting and integrating basic rights, values and legal contracts, laws and social contracts

Stage 6- Moral Focus: Universal ethical principles and moral point of view
- Content/ characteristics: Commitment to the universal principles of justice, respect for others

- During adolescence Stages 5 and 6 are reached which reflects principled reasoning and the young person demonstrates an awareness of values and rights of both the self and of others
• p230 for example of a moral dilemma

Stage	Moral focus	Content/characteristics
PRECONVENTIONAL		
Stage 1	Punishment and obedience Egocentric	Does not recognise different points of view Confuses perspective of authority with one's own
Stage 2	Individual, instrumental and concrete	Aware of different interests and that these may conflict Instrumental exchange of services, goodwill and fairness
CONVENTIONAL		
Stage 3	Mutual interpersonal expectations, conformity and relationships	Following rules, living up to the expectations of others, and maintaining trust, gratitude, respect and loyalty
Stage 4	Social system and maintenance of one's conscience	Doing one's duty, taking the view of the system, obeying laws and upholding the social order
POSTCONVENTIONAL		
Stage 5	Rights and social contract	Asserting and integrating basic rights, values and legal contracts Laws as social contracts
Stage 6	Universal ethical principles and moral point of view	Commitment to the universal principles of justice Respect for others

- Moral dilemma: A woman was near death from cancer. A drug was found that might save her but costs $4000. Sick woman husband went to everyone to borrow money, but could only gather $2000. Should Heinz break into the laboratory to steal the drug for his wife? why or why not?
• Stage 1: He should not steal the medicine, because he will go to prison
• Stage 2: He should steal the medicine, because he will be much happier if he saves his wife, even if he goes to prison

- Stage 3: He should steal the medicine, because his wife expects it
- Stage 4: He should not steal the medicine, because the law prohibits stealing
- Stage 5: 1) He should steal the medicine because everyone has the right to live, regardless of the law. 2) He should not steal the medicine, because the doctor has the right to fair compensation
- Stage 6: 1) He should steal the medicine, because saving a human life is more fundamental than the property rights of another person. 2) He should not steal the medicine, because that violates the rule of honesty and respect

Moving on from Kohlberg
- If Kohlberg's stages are true sequence then we should find a strong positive correlation between age and level of moral reasoning
- Many countries from around the world have found a strong positive correlation between the age and level of moral reasoning (Shaffer 1999)
- But these studies could not show that the sequence is invariant (never changing)- We need longitudinal design and follow the same people across time
- Ann Colby and her colleagues (Colby et al, 1983) followed Kohlberg's original participants for 20 years and found the stages did occur in the order that Kohlberg proposed (p.g 231)
- Richard Shweder considered that Kohlberg's research methods led him to 'impose stage classifications upon informants from other cultures that both distort the meaning of what they have to say and fail to take account of implicit structures in their view of their own social order' (Durkin, 1995) p.g 231

- Kohlberg's theory is culture biased: Shweder argues that Kohlberg's coding system does not allow him to take into account the reasoning of a man with a sophisticated understanding of his own culture (Shweder 1991)
- Kohlberg's theory has also been seen as gender-biased: (Gilligan 1982), Early research suggested that women reached Kohlberg's stage 3 where man stage 4

- Carol Gilligan (1982)
- This was due to the different socialisation of girls and boys resulting in different values
- Gilligan argued that males are socialised to be independent and achievement-orientated they see moral dilemmas as a conflict of interest between individuals which rules and laws are designed to resolve- adopt a morality of justice (stage 4)
- In contrast girls are socially responsible and nurturing- adopt morality of care (stage 3)
- Gilligan argued that female's moral reasoning is not inferior but different
- Gilligan examined the moral reasoning of a group of 29 American women, she presented them with a real-life moral dilemma: whether of not to continue a pregnancy, she posed a genuine conflict between personal choice and traditional female values of self-sacrifice and care for others
- From her interviews Gilligan identified 3 levels of reasoning:
1) Level 1: Self interest: Women justified response solely in terms of their own needs and wishes
2) Level 2: Self-sacrifice: Women argued in terms of the rights of others, referring to the wishes of the partner or the rights of the unborn child
3) Level 3: Care as a universal obligation: Women tried to reach a balance between care for other and personal well-being. One woman whom Gilligan classed at this level argued that the decision has got to be, first of all, something that the woman can live with… or at least try to live with, and must be based on where she is at and other significant people in her life are at (Gilligan, 1982, p.g 96)

- Reviews of many studies indicate most studies using Kohlber's techniques do not show sex differences and where they do, they are not always in favour of males (Durkin, 1995)
- Gilligan has been criticised for basing her own theory on a small number of interviews and only women, but her research has encouraged later researchers to examine morality in both men and women in terms of justice and care

Erikson's stage theory of identity
- Sense of identity: Establishing the distinct nature of the self
- Erik Erikson (1902-1994) described the development of identity of childhood and across the lifespan
- Series of continual challenges have to be met by the individual to move successfully to the next phase
- Major question "Who am I?"
- Identity formation starts at infancy through to old age

- The stages are based on Erikson's clinical observations of the patients he was treating
- Unsuccessful resolution can lead to people being 'stuck' at a particular stage then not developing normally
- Abnormal personality development could be traced to failure to resolve a particular identity crisis at an earlier stage of development
- One of the few theories to adopt a true lifespan perspective and link development in infancy

Stage 1: Infancy
- Ages 0-1
- Crisis: Trust vs Mistrust
- Description/ Outcome of crisis: Infants are dependent on others for food, warmth and love and must trust others to provide these, if needs are consistently met then they are able to develop secure attachment to their primary caregiver and learn to trust others, if fail to bond then mistrust of the world around them.

Stage 2: Toddler
- Ages 1-3
- Crisis: Autonomy vs shame and doubt
- Description/ Outcome of crisis: Toddlers learn to walk, talk, feed and use the toilets and become less dependent on others, success leads to self-control and confidence and mistakes are fixed or corrected, overprotection by or disapproval from parents can lead to shame and doubt on the ability to be independent

Stage 3: Early Childhood
- Ages 3-6
- Crisis: Initiative vs guilt
- Description/ Outcome of crisis: Child's social and motor skills become highly developed and dilemma is to balance the wish to achieve more and take more responsibility while accepting parental control and discipline without the guilt

Stage 4: Middle Childhood
- Ages 6-12
- Crisis: Industry vs inferiority
- Description/Outcome of crisis: Industry is competence achieved at school, relationships with friends and peers increase, children who are awarded for their industry and achieve success at school will develop through competence, while a failure to achieve competence may lead to a feeling of inferiority

Stage 5: Adolescence
- Ages 12-18
- Crisis: Identity vs role confusion
- Description/Outcome of crisis: To answer the question of "Who am I?" successfully, must integrate all resolutions to the earlier crises and achieve sense of identity incorporating all elements of self, this is major as failure to achieve this can lead to role confusion, indecision and avoidance of commitment

Stage 6: Early Adulthood
- Ages 18-40
- Crisis: Intimacy vs isolation
- Description/ Outcome of crisis: If intimacy is not achieved with another person then a failure to develop sense of identity can mean that an adult is incapable of forming an intimate relationship and sinks into isolation

Stage 7: Middle adulthood
- Ages 40-65
- Crises: Generativity vs stagnation
- Description/ Outcome of crisis: In middle adulthood, the main focus is on work and maintenance of family relationships, success in both these areas leads to a sense of accomplishment and leaving a legacy for the future, failure can lead to self-centredness and stagnation

Stage 8: Late adulthood
- Ages: 65-death
- Crisis: Integrity vs despair
- Description/ Outcome of crisis: time to reflect on one's contribution and to view it as positive and satisfactory or unsatisfactory, if life is fulfilled then death is viewed as integrity if not death will be despaired or even feared

Stage	Crisis	Description and outcome of crisis
1 Infancy, ages 0–1	Trust versus mistrust	Infants are dependent on others for food, warmth and love, and must trust others to provide these. If the infants' needs are met consistently and responsively, then infants will develop a secure attachment to their parent or caregiver and learn to trust others. A failure to bond with a caregiver can lead to mistrust of the world around them.
2 Toddler, ages 1–3	Autonomy versus shame and doubt	Toddlers learn to walk, to talk, to feed themselves and to use toilets, so become autonomous and less dependent on others. Success at becoming independent leads to self-confidence and self-control and mistakes are easily fixed or corrected. Overprotection by or disapproval from parents can lead to shame and doubt on the toddler's ability to be independent.
3 Early childhood, ages 3–6	Initiative versus guilt	Children's social and motor skills become highly developed during early childhood, and the dilemma for these children is to balance the wish to achieve more and take more responsibility while accepting parental control and discipline without guilt.
4 Middle childhood, ages 6–12	Industry versus inferiority	Industry can be regarded as competence and this is achieved through learning at school. Meanwhile, relationships with friends and peers increase. Children who are rewarded for their industry and achieve success at school will develop a sense of competence and mastery, while a failure to achieve competence may lead to a feeling of inferiority.
5 Adolescence, ages 12–18	Identity versus role confusion	To answer the question of 'Who am I?' successfully, an adolescent must integrate all the resolutions to the earlier crises and achieve a sense of identity incorporating all the elements of self. This is the major crisis to be resolved for successful transition to adulthood. Failure to resolve the identity conflict can result in role confusion, indecision and avoidance of commitment.
6 Early adulthood, ages 18–40	Intimacy versus isolation	During early adulthood, the achievement of intimacy with another person is important. A failure to develop a sense of identity can mean that a young adult is incapable of forming an intimate relationship and thus sinks into isolation.
7 Middle adulthood, ages 40–65	Generativity versus stagnation	In middle adulthood, the main focus is on work and the maintenance of family relationships. Success in both these areas leads to a sense of accomplishment and leaving a legacy for the future. Failure to resolve this crisis can lead to self-centredness and stagnation.
8 Late adulthood, ages 65 to death	Integrity versus despair	Towards the end of one's life, there is time to reflect on one's contribution and to view it as positive and satisfactory or as disappointing and unsatisfactory. If life is regarded as fulfilled, an older person can view death with a sense of integrity; if not, death will be despaired and even feared.

Bandura's social learning theory (the role of observational learning and modelling)
- Albert Bandura (1925) Is an american Psychologist, his theory of how children develop is more restricted in its scope then Piaget's, his interest is in how people learn social behaviour
- Strongly emphasised observational learning (modelling or imitation), children watch other people and copy their behaviour
- Children can learn complex social behaviours ranging from aggression and altruism to sex roles

- In the original version of his theory he proposed that children took in information from watching others and simply copied it, his conclusions based on a Bobo doll
- The doll was repeatedly knocked over by a female student, she bashed it, shouted aggressive words and was taped and shown to groups of young children
- The children were later allowed to play with the doll and the children behaved in exactly the same way as the female student, the children demonstrated their behaviour without reinforcement or punishment

- Bandura conducted many variations of this experiment and each time the children imitated the behaviour of the female student
- This challenged behaviourist theory
- Bandura called this observational learning and the subsequent theory, the "Social learning theory"
- Applications of social learning theory and observational learning are found in research on children's aggressive behaviour in playgrounds and in research on the side effects of television viewing on children's behaviour
- In later versions of his theory, Bandura (1986) acknowledged that learners play an active role in the modelling process, choosing which models they attend to and whether the behaviour is consistent with their beliefs and values and produces wanted outcomes
- Bandura (1977) believes that humans are active information processors and think about the relationship between their behaviour and its consequences. Observational learning could not occur unless cognitive processes were at work. These mental factors mediate (e.g intervene) in the learning process to determine whether a new response is acquired
- Therefore, individuals do not automatically observe the behaviour of a model and imitate it. There is some thought prior to imitation and this consideration is called 'mediational processes'.
- This occurs between observing the behaviour (stimulus) and imitating it or not (response)

Four meditational processes (Bandura)
1) Attention
- The extent to which we are exposed/notice the behaviour
- For a behaviour to be imitated it has to grab our attention
- We observe many behaviours on a daily basis and many of these are not noteworthy
- Attention is therefore extremely important in whether a behaviour has an influence in others imitating it

2) Retention
- How well the behaviour is remembered
- The behaviour may be noticed, but is not always remembered which obviously prevent imitation
- It is important therefore that a memory of the behaviour is formed to be performed later by the observer
- Much of social learning is not immediate so this process is especially vital in those cases. Even if the behaviour is reproduced shortly after seeing it, there needs to be a memory to refer to.

3) Reproduction
- This is the ability to perform the behaviour that the model has just demonstrated
- We see much behaviour on a daily basis that we would like to be able to imitate but that is not always possible
- We are limited by our physical ability and for that reason, even if we wish to reproduce the behaviour, we cannot
- This influences our decision whether to try and imitate it or not.

4) Motivation
- The will to perform the behaviour
- The rewards and punishment that follow a behaviour will be considered by the observer
- If the perceived rewards outweighs the perceived costs (if there are any) then the behaviour will more likely be imitated by the observer

- If the vicarious reinforcement is not seen to be important enough to the observer then they will not imitate the behaviour

Research designs in developmental psychology
- Most common research design in developmental psychology is cross-sectional design and longitudinal design

The cross-sectional design
- Study people who differ in age at the same point in time
- Ethical dilemmas were presented to children of different ages and asked how person should behave and why, then children reasoning was rated according to Kohlberg's criteria for the different stages, researchers were able to show that older children are more likely to reason at a higher level
- This design can tell us age differences but can't tell us that there are developmental differences- we don't know if children in the youngest group will reason like the children in the oldest age group when they are at that age
- In cross sectional research, participants at each age level are different people, the come from different cohorts
- Cohort: Is defined as a group of people of the same age who have experienced the same cultural conditions and environmental events
- Cross-sectional is used because it is quick and easy- especially if no reason to expect cohort differences

Longitudinal research designs
- Study the same group of people at different points in time
- In developmental research often over a period of years
- Since individuals are followed across time there is no need to be concerned about possible cohort effects
- Limitations: Expensive, participants might move, unable to be traced, may die, practice effect (carry out the same task several times may improve results)
- Cross generational problem- children might have different experiences at each point in their life span than children in earlier or later generations (e.g different leisure activities compared to your grandparents)

Longitudinal-sequential design
- Features both the cross-sectional and longitudinal in attempt to overcome the limitations of each
- Groups of particular patients are followed over time as in a longitudinal study, but at each measurement point, a new group is added that is the same age as the first group at the first measurement point