

The four 'grand theories' attempt to provide holistic explanations of development - not just specific aspects. (Note - other grand theories exist).

1. Behaviourism (Learning Theory) [Skinner]

Psychology as an objective science. Does not speculate on cognition. Learning (conditioning) defined as 'any relatively permanent change in behaviour produced by environmental conditions'.

Pavlov - Classical conditioning (animal expt)

Before:

Unconditioned Stimulus -> Unconditioned Response
Neutral Stimulus -> ?

Process:

Associate NS with US (e.g. ring bell and present food repeatedly). Eventually, NS becomes a CS, provoking a CR.

After:

Unconditioned Stimulus -> Unconditioned Response
Conditioned Stimulus -> Conditioned Response

Can be weakened if CS often presented w/out the US.

Example - **Watson** - 'Little Albert' (human expt)

Skinner - Operant Conditioning - 'Skinner Box' (animal expt).

Use of punishment to decrease a particular behaviour.
Positive punishment - aversive stimulus presented;
Time-out - Isolation from reinforcer
Response Cost - e.g. token removed

Reinforcement (positive and negative) to increase a particular behaviour.

Positive reinforcement - pleasant stimulus presented;
Negative reinforcement - aversive stimulus removed.

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Extinction - occurs when the behaviour is no longer reinforced - usually after an **extinction burst** - when a previously reinforced behaviour no longer attracts reinforcement.

Schedule of reinforcement is also important - e.g. gold stars occasionally given work better than giving one every time - as if a star is not given then demotivation sets in.

For punishment to be effective it has to be **contingent** (immediate), severe and consistently applied (**Klein**). **Skinner** also found that punishment only suppresses behaviours temporarily. Can stimulate aggressive behaviour or suppress it - long term effects are often not what was wanted (**Huesmann et al**). Many negative short and long term consequences (**Gershoff**). **Time-out** is effective in controlling tantrums (**Klein**).

Punishment only teaches what responses should **not** be made. Contemporary techniques - such as **Applied Behavioural Analysis** (ABA) do not use punishment. Selects appropriate behaviours as teaching targets; positive reinforcement provided in such a way that is positive for the individual. Amount of reinforcement reduced over time. **Keenan et al** found evidence it can help autistic children be successful in mainstream schooling - but the stigma associated with behaviourist ideas means that take-up has been low. ABA does **not** ignore child's beliefs.

Positives: Useful where a child cannot speak; decades of research done; ABA demonstrates how operant conditioning principles can be applied.

Criticisms: Classic behaviourism ignores child's beliefs - if a child understands why they are treated in a particular way development is more likely (**Huesmann et al**). Oversimplification to suggest learning only occurs through direct experience - what about language, cognition and social behaviour? Children learn more from experience of punishment than simply its relationship to their behaviour - adults may be modelling / signalling it is ok to use indiscriminately.

2. Social Learning Theory [Bandura]

Bandura - children learn by observing the behaviour of others. They form an idea of how novel behaviours are performed and store this knowledge for later use.

Support comes from - Guatemalan girls learning weaving by observation (**Crain**).

Bandura proposes to learn, four factors are at play:

Attend - to the model and their behaviour
Retain - what they have seen - encoding & rehearsal
Be physically able - to reproduce the behaviour
Be motivated - by presence of reinforcement & punishment in the observed setting

Example - Bobo doll study on 4 y.o. children. Three different films used. Where the man is punished for hitting the doll, children exhibited less aggression towards the doll than children in the 'no consequences' or 'rewarded' version of the film. When children were told they would be rewarded, all three groups imitated equally well. Important point is that the behaviour had been learned purely through observation.

Applied to TV violence (**Liebert et al**). **Bandura** found that children more likely to copy if model is similar to them or has desirable characteristics.

Bandura's view was learning = 3 stages:

Exposure, acquisition, acceptance. His explanation has been challenged as too simple by **Kytomaki** who argues family conditions in which tv watched have an impact. **Davidson** provides support for Bandura - amount of violence watched by 8 y.o. better predictor of adult aggression than socio-economic or childrearing factors. **Hutson et al** note positive influence of tv on 3 y.o. - they are better academically at 6 than those who did not watch educational tv at 3.

Positives: Children are active in their learning; can happen without reinforcement that behaviourism sees as important. Bandura's work implies children get general principles from what they observe.
Criticisms: SLT does not tell us about what children think or the cognitive changes that are taking place. Emphasis is placed on external factors to the child.

3. Constructivism [Piaget]

Argues individuals develop increasingly complex and sophisticated mental representations of their environment based on the consequences their actions have on their surroundings. Argues that development occurs and is constructed in the same order for all humans - because there is an inherent logic to the gaining of knowledge. The building blocks are universal - but development is the child's own construction.

Theory originated based on observations of his own children - e.g. the conclusion that infants do not understand '**object permanence**'. Infants are centred on themselves - dominance of their own perceptions - known as **egocentrism**. As children develop, they can hold objects for themselves - repetition of actions (e.g. dropping things) is particularly prevalent - helps to build up **mental representations**.

Concept of **schema** - a representation of a sequence of actions based on interaction with the environment - key to development. They become adapted to new situations as the child develops e.g. sucking. Process of adaptation is known as **assimilation**. **Intrinsic motivation** - the desire to apply schemas to new situations => development. **Accommodation** describes the process where schemas become modified to match the particular characteristics of objects or circumstances - e.g. 'swipe and grab' of an object is modified over time depending on the nature of the object being picked up.

Piaget's ideas introduce a **stage theory** of development. He describes four stages:

0-2: **Sensori-motor** - Children born with reflexes to help them make sense of the world. New knowledge and behaviours are acquired as long as they make sense with their existing behaviours. New behaviours are generated in response to the environment - schemas. More elaborate schemas are formed. Stage finishes when the child is able to represent their behaviours internally.

2-6: **Pre-operational** - The use of sequences of actions that can be carried out symbolically - e.g. mathematical operators. They perform them on real world objects - they can't represent them symbolically.

6-12: **Concrete operations** - Use of sequences from the previous stage and the generation of rules - e.g. if you add something to something else you always get 'more'. They can work symbolically too - e.g. mental arithmetic. Can only understand rules they have actual experience of - but are unable to use rules to anticipate something that might happen, but they haven't experienced.

12+: **Formal operations** - Abstract reasoning occurs. Hypotheses about the world based on prior experience can be formed. Problems are tackled in a systematic manner.

Implication of this theory is there are boundaries between stages and a transformation takes place. Can assess by the use of sets of experimental tasks.

e.g. **Conservation** tasks are not understood at the pre-operational stage but are at the concrete operations stage. Examples - rice, plasticine, water in beakers.

Piaget's theories have led to support for discovery learning - teaching has little place as a rich learning environment is far more important. Learning must be self-directed rather than a superficial imitation of adult performances. Peer contact - through stimulating **socio-cognitive conflict** important as it helps accommodation to occur. Adults can't do this - power imbalance.

Positives: Recognises children think differently to adults. Learning as an individual and constructive process counter to behaviourist views.
Criticism: The experiments can be modified to show that children perform above where Piaget predicts.
Donaldson - children's reasoning is more sophisticated than the experiments suggest - if the reasoning provided to the children as to why things happen in the tasks - i.e. they have a social context (logical explanation), children perform better. **Light** - pasta put into another beaker because it is chipped - conservation occurs. (Similar tasks - naughty teddy, three mountains on DVD). Children try to identify meaning in meaningless tasks (**Hughes and Grieve** - is milk bigger than water?) to 'please' adults.

The lack of attention placed on social and cultural contexts is the biggest criticism of **Piaget**.

4. Social Constructivism [Vygotsky]

Similar conclusions (separately arrived at) as to the constructive nature of learning - but the role of the social and cultural world is key. The novel use of tools is what makes us human - e.g. hammers are **cultural tools**, developed over generations, and can be **appropriated** in new ways for someone's own needs. Ways of thinking and language are also cultural tools.

e.g. context of A,D,3,7 cards vs. who's drinking in the pub?

Counter to **Piaget** who argues that thought and language development depend on underlying intelligence, **Vygotsky** proposed language is used for inner speech (mental reasoning) and external speech (communication). They arise separately. Up to age 2, a child's internal cognition is without language. Thought and language merge at age 2. "Every function in the child's cultural development appears twice: first, on the social level and later, on the individual level". (**Vygotsky**).

Egocentric speech - ages 3-4 - children often talk to themselves. Seen as an important part of the child

internalising external social speech they have heard. Self talk when internalised guides the child's actions. Evidence to support this is that more difficult tasks result in increasing self talk.

Vygotsky argues that contact with more able others promotes learning. People with differing abilities create a **zone of proximal development (ZPD)** - allowing the less able partner to tackle a new task and so become more competent. Social interaction and the situation create the **scaffolding** by which this occurs (**Wood et al**). The scaffold is gradually withdrawn as the learning becomes able to work with less support.

Vygotsky therefore positive about the role of school instruction - charting new paths for development, not precluding it. **Donaldson** supports this - the only way someone can solve the A,D,3,7 problem is if someone is taught how to do it.

Applied to deaf-blind education. **Cognition is actively developed by language**. Therefore, their language skills are developed (sign language for example). Higher order psychological skills then develop that enable the lower order ones to be controlled.

Basic skills taught (e.g. feeding); adult support provided during the task. Once developed, aim is to develop social language. E.g. introduce a gesture for food - eating. Gesture equivalents that have an arbitrary connection are then taught. Finally, children are taught the association between gesture equivalents and words.

Postives: Highlights how developmental and cultural forces interact in learning - **Moll** credits Vygotsky outlines a general approach that brings education, as a fundamental activity, fully into a psychological development theory.

Criticisms: Does not consider the 'inside out forces from a child's perspective - reflected in his support for formal school instruction. Promotes separate educational practices for different groups of children (as applied in USSR). In UK, **Thomas and Glenny** have used his theories to introduce peer tutoring and to

tackle static learning models that constrain the development potential of some children. **Crain** argues his ideas may lead to too much focus on future achievements to the detriment of 'childish' capabilities - such as imagination and singing. But waiting until a child is ready would imply the child doesn't need teaching!! E.g. deaf-blind children might never be ready and so remain locked out of the world at large.

Conclusions

The theories have a lot in common - e.g. they all value the environment in which a child is raised, but differ as to how important it is.

Behaviourism - most empiricist position on environment, but SLT places the environment provided by other people's behaviour at the centre; environment as providing opportunities for exploration is at the centre of constructivism; cultural environment at the centre of social constructivism.

Nativist theories do exist - but only for elements - e.g. for language development.

However, all four grand theories recognise the impact of both nature and nurture on development.