

## Caregiver-Infant Interactions

- Reciprocity → turn-taking between infants and caregivers e.g. one smiles, the other laughs.
- Interactional synchrony → Mirroring of facial expressions/movements during communication, move in time with each other.
- Imitation → infant/caregiver copies other e.g. caregiver claps and infant claps.

✔ Supported by 'frozen face' experiment.

✘ Concerns over validity and whether infants expressions are naturally occurring rather than imitated, findings may lack ecological validity as studies take place in artificial settings, practical difficulties studying caregiver infant interaction.

## Development Of Attachment Schaffer And Emerson (1964)

18 month study of 60 mothers and infants in Glasgow.

1. Pre-attachment (0-2m) – similar response to all people and objects.
2. Indiscriminate attachment (2-7m) – forming preferences for humans over objects.
3. Discriminate attachment (7-10/11m) - show attachment to PCG with separation and stranger anxiety.
4. Multiple attachment (10/11m+) - secondary attachments develop. 65% formed primary attachment to mother, likely to be person who was most responsive.

✘ Findings could be biased due to self-report nature of research (mothers may not be honest), findings may be difficult to generalise due to limited sample.

✘ Disagreement about importance of multiple attachments - Bowlby suggests only attachment to mother is important.

## Role of the Father

- Fathers more likely to be secondary attachment .
- Fathers adopt play-mate role involving games/play whereas mothers have emotional role .
- Fathers adopt caregiving role in absence of mother .
- Attachment to father influences later development e.g. IQ.

✘ Importance of father is questioned - children raised in lone-parent or same-sex families do not develop differently, Bowlby says father only plays economic role.

## Animal Study – Lorenz (1935)

- Greylag geese eggs were randomly divided into a group that hatched with their natural mother and a group that hatched in an incubator. When incubator eggs hatched the followed Lorenz around (imprinting).
- Found this was long-lasting and irreversible, supports innate nature of attachment.

✘ Issues generalising findings to humans (more emotional involvement), evidence suggests imprinting can be reserved (e.g. Guiton chicken study).

## Animal Study – Harlow

- 8 Rhesus monkeys were caged with 2 wire mothers; one provided comfort the other food. Time spent on each was measured.
- All monkeys spent more time with the cloth mother, only leaving to feed. When frightened they would cling to the cloth mother. Suggests comfort/love is key to attachment, not food.

✘ Issues with generalising findings to human infants (attachment may be more complex), ethical issues of long-lasting harm caused to animals due to experiment.

## Cultural Variations

- Van Ijzendoorn and Kroonenberg - meta-analysis of 32 studies in 8 countries, 2000 strange situation classifications.
- Secure is most common.
- Avoidant was 2nd most common except in Israel and Japan (collectivist).
- Resistant is least common in individualistic cultures.
- 1.5X greater variation within cultures than between them.

✔ Larger sample size than single studies.

✘ Not representative of all cultures,

over-represents individualist cultures, used SS which is ethnocentric and may not produce valid classifications.

## Maternal Deprivation – Bowlby

- Frequent and prolonged separation from maternal caregiver during first 2.5 years has negative and irreversible consequences. Effects: Lower IQ → the longer a child spends in care the lower their IQ and social maturity. Affectionless psychopathy → 86% of juvenile thieves had frequent separations. Leads to lack of guilt, empathy and remorse. Poorer mental health → higher chance of anxiety and depression.

✔ RWA - changes to childcare practices and hospital visiting

✘ Effects may depend on individual differences such as attachment type (Bowlby)

✘ Research is only correlational (cannot establish cause and effect), some children can recover from separation.

## Explanations Of Attachment – Learning Theory

Classical conditioning → caregiver becomes a conditioned stimulus because it's associated with pleasure of food, this association is the basis of attachment bond. Operant conditioning → attachment is maintained as infant seeks mother (secondary reinforcer) to receive the reward of food (primary reinforcer).

✘ Not supported by Harlow or Shaffer and Emerson (food was not key to attachment).

✘ Too simplistic to explain human attachment (ignores love, comfort, emotion etc).

## Explanations of Attachment - Bowlby

- Adaptive and innate → infant is born ready to attach to maternal caregiver
- Monotropy → infants form one special attachment to mother.
- Critical period → attachment should form in first 3-6m.
- Internal working model → attachment to mother acts as template for future relationships.
- Continuity hypothesis → attachment in infancy influences later attachments,

✔ Continuity is supported by Hazen and Shaver - correlation between attachment in infancy and later romantic relationships.

✘ Critical period is too restrictive - children are able to form attachments after 6m, socially sensitive and has implications for mother (could be pressured to take on caregiving role), ignores importance of father and multiple attachments.

## Measuring Attachment – Ainsworth

Controlled observation, 8 episodes, infant observed through one-way mirror, behaviour recorded every 15 seconds, 4 behaviours measured - Separation anxiety, reunion behaviour, stranger anxiety and exploration observed.

• Secure 66% → moderate separation distress and stranger anxiety, seeks mother on reunion.

• Avoidant 22% → high exploration, low separation and stranger anxiety, avoids/ignores mother on reunion.

• Resistant 12% → low exploration, high stranger and separation anxiety, seeks and rejects mother on reunion.

✔ High reliability - 94% agreement between observers on attachment type.

✘ Issues with artificial setting/demand characteristics (mother may change behaviour), does not measure attachment to father, is ethnocentric and may not be applicable to measuring attachment in other cultures, could be unethical as causes distress.

## Influence of Early Attachments

• Relationship with PCG acts as template for future relationships through IWM. A positive IWM leads to happy, trusting relationships in childhood and adulthood through continuity hypothesis.

### Childhood

• Sroufe → securely attached children have better peer relationships.

### Adulthood

• Hazen and Shaver → people who are securely attached in infancy have happier, longer-lasting adult romantic relationships.

• McCarthy → secure attachment leads to stronger adult romantic and friendship relationships. • Bailey → attachments run in families, likely to have same attachment to mother and own children.

✘ Early attachment does not have a consistent effect on later relationships, research is only correlational, children can recover from poor early attachment experiences.

## Effects Of Institutionalisation

When children spend an extended time in an institution such as an orphanage and adopt rules/norms/behaviours of that institution.

• Bowlby (juvenile thieves study - delinquency, affectionless psychopathy), Goldfarb (lower IQ).

### Romanian Orphans

• Rutter → longitudinal study of 165 Romanian adoptees, those adopted before 6m had better outcomes (higher IQ, better relationships), those adopted after 6m more likely to show disinhibited attachment.

• Bucharest project study → children less likely to be classified as securely attached.

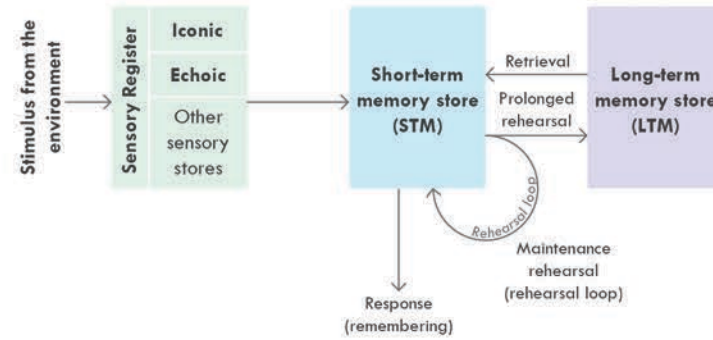
• Le Mare and Audet → orphans likely to be smaller but this is overcome with good substitute care.

✔ RWA - changes to institutions and adoption policies, longitudinal studies help to assess effects over time.

✘ Romanian studies - limited samples as only one type of institution.

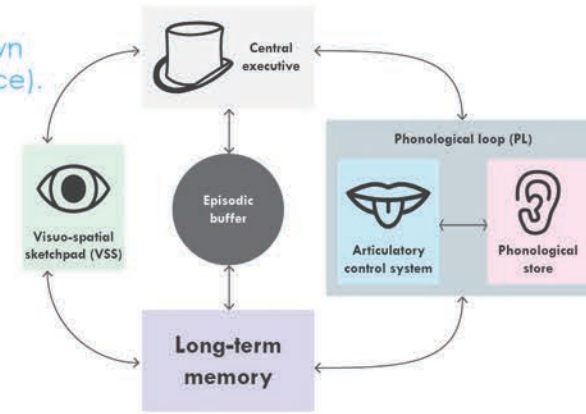
## Multi-store Model (1969)

- Sensory register holds info relating to the 5 senses.
- If attention is focused, information is passed onto the STM. Maintenance rehearsal is needed to move information into LTM, otherwise it decays (or is displaced).
- ✓ Lots of evidence for separate stores. Brain damage case studies show separate stores (Clive and HM).
- ✗ Reductionist / unitary stores challenged by WMM and Tulving. LTM involves more than repetition (elaborative rehearsal).



## Working Memory Model (1974)

- Challenged MSM, stating that STM has stores within it because we can see and listen at the same effectively, but struggle to listen or see 2 items at once.
- Central executive - directs information to the correct 'slave systems'.
- Phonological loop - limited capacity, auditory store which breaks down into phonological store (inner ear) and articulatory processes (inner voice).
- Visuo-spatial sketchpad - subdivided into inner scribe & visual cache. 3-4 items.
- Episodic buffer - added in 2000. Collates all information together and passes it onto LTM.
- ✓ Dual-task performance and case studies of brain damage (KF).
- ✗ Central executive is vague and limited / reductionist. Problems with case studies.



## Forgetting

### Interference

**Retroactive** - new learning interferes with past learning. **Proactive** - past learning interferes with new learning.

✓ Real-world application to advertising. Supporting research (McDonald - 6 chicken nuggets! And rugby players study).

✗ Artificial research / theory lacks ecological validity (information in real-life has meaning attached).

### Retrieval Failure

Based on Encoding Specificity Principle (ESP).

**Context dependent forgetting** occurs when the environment at learning does not match environment at recall.

**State dependent forgetting** occurs when the mental state at learning does not match the mental state at recall.

✓ Real world application (mental reinstatement) / supporting research (deep sea divers study for context dependent and antihistamines for state dependent).

✗ Circular theory (difficult to falsify). Recall vs recognition.

## Differences in STM & LTM

	Sensory Register A temporary store	STM	LTM A permanent store.
Capacity = amount	Large - Eg. Each eye has 100 million cells each storing visual data.	7 items +/- 2, [Jacobs, 1887] [Miller, 1956]	Unlimited
Coding = format	Based on senses. 2 most common:  Iconic (visual is stored visually)  Echoic (sound is stored acoustically)	Acoustic (Sound) [Baddeley, 1966]	Semantic (meaning) [Baddeley, 1966]
Duration = timeframe	Limited - If no attention given, spontaneous decay takes place and it fades away quickly.	Limited (18 - 30 seconds without rehearsal) [Peterson, 1959]	Unlimited (Bahrick, 1975)

## Types Of LTM

- **Episodic** - Personal experiences, time-stamped, conscious recall
- **Semantic** - facts and knowledge, shared with others, conscious recall
- **Procedural** - action based skills & tasks e.g. riding a bike, unconscious recall.
- ✓ Brain scans show memories in different places. HM case study.
- ✗ Case studies are limited. Brain scans have limitations, post mortem needed. Real life applications for memory disorders. Three types of LTM or 2? i.e. declarative (knowing what) vs non-declarative (knowing how).

## Eyewitness Testimony

### Anxiety


#### Weapon focus effect

Ppts asked to sit in a waiting room where they heard an argument. A man runs out with either a pen covered in grease or a knife in blood. They were asked to identify the man.

- 49% identified the man in the pen condition, 33% identified the man in the knife condition.
- Anxiety can have a negative effect by drawing people to specific details of the crime and away from features of the criminal.
- ✓ Yerkes - Dodson Curve - too much anxiety will impair recall accuracy.
- ✗ In real-life crimes, witnesses are likely to remember 75% of detail up to 15 months after the crime.

### Leading Questions

#### Loftus and palmer (1974)

- 45 ppts shown 7 films of different traffic accidents and were asked to describe the accident.
- "How fast were the cars going when they x each other.....?" 
- Smashed = 40.8mph / collided = 39.3mph / hit = 34mph / contacted = 31.8mph.
- "Was there any broken glass?" Those who were given the stronger verbs were twice as likely to say yes.
- ✓ Real life application - police interviews. Supporting research.
- ✗ Artificial test - lacks ecological validity (emotion) Response bias vs substitution.

### Post Event Discussion

- Memory can be altered or contaminated by co-witnesses if they're interviewed together, interviewed multiple times or able to discuss what they saw.
- 71% of ppts who discussed an event before recall mistakenly recalled information (vs 0%).
- ✓ Real world application - police can use this knowledge when questioning witnesses.
- ✗ Individual differences - children are more influenced by repeat questioning / interviewing.

### Improving EWT: The Cognitive Interview

A police technique for interviewing witnesses to reduce inaccurate information from leading questions.

1. Mental reinstatement - mentally recreate context of crime (close eyes, imagine weather etc).
  2. Report everything - free recall.
  3. Change narrative order - reverse order of recall to challenge schema (e.g. end to beginning).
  4. Change perspective - other witness POV to challenge schema.
- ✓ Supporting research - effective and increases accuracy (81%) / increases quantity of recall.
  - ✗ Increases the amount of incorrect information (61%). Time consuming for police. Artificial supporting research. Different police regions use slightly different techniques (Thames Valley don't use change perspective, so difficult to judge effectiveness).