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A-LEVEL PSYCHOLOGY REVISION NOTES

Attachment

AQA Psychology 7181 (AS) and 7182 (A-level)

2025 specification · spec sections 3.1.3 (AS) and 4.1.3 (A-level)

Compiled by **Simply Psychology** · simplypsychology.org/a-level-attachment.html

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How to use these notes. Attachment content is identical for AS and A-level. Key terms are in **bold**; studies are presented as procedure → findings → evaluation. "Exam tip" boxes call out the most common errors. Definitions of *attachment, critical period, internal working model, monotropy, maternal deprivation, institutionalisation* and the three Strange-Situation types follow AQA's 2025 *Subject specific vocabulary*.

Note on the 2025 specification: Caregiver–infant interactions (reciprocity and interactional synchrony), stages of attachment identified by Schaffer, and multiple attachments / the role of the father were **removed** from the 2025 specification and are not covered in these notes. "Romanian orphan studies" has been **reworded** to the *English and Romanian Adoptees (ERA) project*.

AQA 2025 SPECIFICATION — ATTACHMENT CONTENT

- **Animal studies of attachment**: Lorenz and Harlow.
- **Explanations of attachment**: learning theory and Bowlby's monotropic theory. The concepts of a **critical period** and an **internal working model**.
- **Ainsworth's "Strange Situation"**. Types of attachment: **secure, insecure-avoidant and insecure-resistant**. **Cultural variations** in attachment, including van Ijzendoorn.
- **Bowlby's theory of maternal deprivation**. Effects of **institutionalisation**, including the **English and Romanian Adoptees** project.
- **The influence of early attachment on childhood and adult relationships**, including the role of an internal working model.

1 Animal Studies of Attachment

ATTACHMENT

Attachment is a strong, reciprocal emotional bond between an infant and a primary caregiver. Animal studies have been used because attachment can be observed across whole lifespans in conditions that would be unethical to create with human infants.

Lorenz (1935) — Imprinting in Geese

Feature	Detail
Aim	To investigate whether young birds form an attachment to the first moving object they see after hatching.
Procedure	Lorenz divided a clutch of goose eggs in half. One half was hatched naturally with the mother goose; the other half was hatched in an incubator where Lorenz himself was the first moving object the goslings saw.
Findings	The incubator-hatched group **imprinted** on Lorenz and followed him everywhere; the naturally hatched group followed their biological mother. When mixed together, the goslings continued to follow their respective "mother". Imprinting only occurred within a **critical period** of around 4–25 hours after hatching — if attachment did not form in this window, it never did.
Sexual imprinting	Lorenz also observed that birds who imprinted on humans later showed mating behaviour towards humans. He described the case of a peacock raised among giant tortoises that only attempted to mate with tortoises in adulthood.
Conclusion	Attachment is **innate** and biologically programmed to occur within a critical period. Imprinting is irreversible and has long-term consequences for adult social and reproductive behaviour.

Harlow (1958) — Contact Comfort in Rhesus Monkeys

Figure 1.1 — Harlow's "Iron Maidens". The baby monkey clings to the cloth-covered surrogate (providing contact comfort) even when the wire surrogate dispensed the milk — directly contradicting the learning-theory "cupboard love" account of attachment.

Feature	Detail
Aim	To investigate whether attachment forms through feeding (as learning theory claims) or through contact comfort.
Procedure	16 baby rhesus monkeys were separated from their mothers at birth and raised with two surrogate "mothers": a **wire mother** that dispensed milk, and a **cloth-covered mother** that did not. In one condition the wire mother fed the infant; in another the cloth mother fed the infant.
Findings	Regardless of which surrogate dispensed milk, the infants spent most of their time clinging to the **cloth mother**, only visiting the wire mother briefly to feed. When frightened (by mechanical "monster" toys), they ran to the cloth mother for comfort. The cloth mother also served as a **safe base** for exploration.
Long-term effects	Monkeys raised without a real mother — even those with the cloth surrogate — were socially abnormal as adults: they were aggressive, poor at mating, and many neglected or attacked their own offspring. The damage was most severe when deprivation occurred before 90 days (Harlow's **critical period** for monkey attachment).
Conclusion	**Contact comfort** — not food — is the primary basis of attachment. Attachment is an innate need, and failure to form one within a critical period produces lasting social damage.

Evaluation

Strength — strong empirical support for the role of contact comfort. A major strength of Harlow's research is that it convincingly demonstrated that food is not the basis of attachment. Infant monkeys consistently chose the cloth-covered mother over the wire mother that dispensed milk, contradicting the learning-theory "cupboard love" view that attachment forms via feeding. This is important because it shifted the

field's understanding of attachment from a behaviourist mechanism (food → reward → bond) to an evolutionary one (comfort and security → bond). This therefore strengthens the validity of evolutionary explanations such as Bowlby's monotropic theory.

Strength — practical applications (animal welfare and child care). Both Lorenz and Harlow's work have valuable real-world applications. Harlow's findings shaped zoo design, animal-shelter policy and primate breeding programmes by emphasising the need for contact comfort and stable attachment figures. The research also informed early parenting and child-care recommendations — for example, the importance of physical closeness, skin-to-skin contact and consistent caregivers in neonatal units. This is important because applied success is itself evidence the underlying mechanism is real, and shows animal research can deliver measurable benefit to both animal welfare and human child development.

Limitation — generalisability of animal findings to humans. A significant limitation of both studies is the difficulty of generalising from birds and monkeys to human attachment. Lorenz's geese are precocial (mobile from birth) and form rapid, irreversible imprinting bonds, while human attachment develops more gradually and is shaped by language, cognition and culture. Although rhesus monkeys are closer to humans phylogenetically, Harlow's deprived monkeys were not exposed to the linguistic and social complexity that surrounds human infants. This limits the external validity of these findings as a model of human attachment and means conclusions must be drawn cautiously.

Limitation — serious ethical concerns (Harlow). Harlow's research raises substantial ethical concerns under the BPS code and the 3Rs framework for animal research (Replacement, Reduction, Refinement). The baby monkeys experienced long-term psychological harm — social isolation, inability to mate, and abusive parenting in adulthood. On a cost–benefit analysis the scientific gain is significant (contact comfort, critical period, mother-deprivation effects), but the cost was severe distress in cognitively complex primates that Harlow could foresee. This is an important limitation because it constrains the extent to which similar research can be defended today.

Limitation — imprinting may not be irreversible (Guiton et al. 1966). A further limitation, specific to Lorenz, is that imprinting may not be as permanent as he claimed. Guiton et al. (1966) found that chickens initially imprinted on rubber washing-up gloves later learned to prefer mating with other chickens once exposed to them. This is important because it suggests that imprinting can be modified by later experience, contradicting Lorenz's claim of irreversibility. This weakens the strong critical-period claim and supports the view that learning and experience also shape attachment behaviour.

Application — Issues and Debates (nature–nurture). Lorenz and Harlow's research positions attachment firmly on the **nature** side of the nature–nurture debate by demonstrating biologically prepared, time-limited mechanisms (imprinting and contact comfort). However, the Guiton finding and modern human research show that environment and experience also matter, supporting an **interactionist** view in which innate predispositions are shaped by caregiving experience. This makes animal studies a foundational contribution to one of the central debates in developmental psychology.

2 Explanations of Attachment: Learning Theory

Learning theory (Dollard and Miller 1950) explains attachment using **classical and operant conditioning** — the behaviourist approach. It claims infants are born as "blank slates" and form attachments through experience, specifically through the association of the caregiver with food. This is sometimes called the **"cupboard love"** view of attachment.

Classical Conditioning (Pavlov)

Food is an **unconditioned stimulus (UCS)** that produces the **unconditioned response (UCR)** of pleasure. Before conditioning, the caregiver is a **neutral stimulus (NS)** that produces no particular response.

Stage	Stimulus	Response
Before conditioning	Food (UCS)	Pleasure (UCR)
Before conditioning	Caregiver (NS)	No response
During conditioning	Caregiver + Food repeatedly paired	Pleasure
After conditioning	Caregiver (CS)	Pleasure (CR) — attachment formed

Through repeated pairing of feeding with the caregiver, the caregiver becomes a **conditioned stimulus (CS)** that elicits pleasure on her own. This conditioned emotional response is the basis of the attachment bond.

Operant Conditioning (Skinner)

Attachment is also explained through **reinforcement**. When a hungry infant cries, the caregiver attends to it and provides food. The infant experiences the discomfort of hunger (a primary drive) being reduced — this is rewarding (**positive reinforcement**) and the crying behaviour is strengthened.

- **Food = primary reinforcer** — directly satisfies a biological need.
- **Caregiver = secondary reinforcer** — associated with food and therefore becomes rewarding in her own right.
- **Drive reduction** (Dollard and Miller): hunger is a primary drive; attachment is a secondary drive learned through repeated reduction of hunger by the caregiver.

> **DRIVE REDUCTION (DOLLARD AND MILLER 1950)**
> A motivational state (e.g. hunger) is reduced when a need is satisfied. Behaviours that produce drive reduction are reinforced. Attachment is, on this view, a learned association between the caregiver and the reduction of the primary drive of hunger.

Evaluation

Strength — element of truth (conditioning does occur). A genuine strength of learning theory is that classical and operant conditioning are well-evidenced learning mechanisms. It is plausible that infants do learn associations between caregivers and the pleasure of being fed, and that conditioning contributes to the strength of the bond. This is important because it provides a clear, testable mechanism for how attachment develops in the early weeks of life. To this extent, learning theory captures part of what is going on in early caregiver–infant interactions.

Limitation — contradicted by animal research (Harlow 1958). A devastating limitation comes from Harlow's research. Rhesus monkeys consistently preferred the cloth-covered mother that provided *no* food over the wire mother that *did* dispense milk. This is important because it directly contradicts the central claim of learning theory: if attachment were learned through feeding, the infants should have bonded with the wire mother. This therefore weakens the validity of learning theory as a complete explanation of attachment because contact comfort, not food, drove the bond.

Limitation — contradicted by human research (Schaffer and Emerson 1964; Feldman). Further contradictions come from human research. Schaffer and Emerson (1964) found that many infants formed a primary attachment to the person who was most *sensitive and responsive* to them, not necessarily the person who fed them. Feldman and others have shown that **interactional synchrony** — the rhythmic matching of caregiver and infant behaviour — is a stronger predictor of secure attachment than feeding. This is important because if attachment were based on food, attachment quality should correlate with feeding frequency, but it does not. This further weakens learning theory's explanatory power for human attachment.

Limitation — environmental reductionism. A further limitation is that learning theory is **environmentally reductionist**. It reduces the rich emotional bond between infant and caregiver to a sequence of stimulus–response associations and ignores the role of innate biological predispositions (Bowlby), cognitive factors (the internal working model) and the active contribution of the infant. This is important because reducing a complex emotional system to learned associations loses the very features (love, security, comfort-seeking) that attachment is about. An interactionist account — with biological preparedness *and* learning — provides a more complete picture.

Limitation — alternative explanation (Bowlby's monotropic theory). A stronger alternative explanation is Bowlby's evolutionary monotropic theory, which proposes attachment is innate, time-limited (critical period) and serves an adaptive survival function. This is important because Bowlby's theory accounts for findings that learning theory cannot — the universality of attachment across cultures, the existence of critical periods, the role of social releasers and the internal working model. The existence of a better-supported alternative further limits the credibility of pure learning theory.

Conclusion. Overall, while conditioning may play a minor role in shaping caregiver–infant interactions, learning theory is largely unable to explain why attachments form. The combined weight of Harlow's animal research and human findings on sensitive responsiveness has led most attachment theorists to adopt Bowlby's evolutionary account rather than a behaviourist one.

3 Bowlby's Monotropic Theory of Attachment

Bowlby (1969) proposed an **evolutionary** theory of attachment: attachment is innate, biologically programmed and serves an adaptive function — keeping the infant close to a caregiver who provides food, warmth and protection. Infants who form attachments are more likely to survive and reproduce, so the disposition to attach has been naturally selected.

> **THE ASCMI ACRONYM**
>
> A useful memory aid for Bowlby's theory is **ASCMI**: **A**daptive, **S**ocial releasers, **C**ritical period, **M**onotropy, **I**nternal working model.

The Five Components

Component	What it means
Adaptive	Attachments are an evolutionary adaptation — they keep infants safe, warm and fed, giving them a survival advantage. The disposition to form an attachment has therefore been naturally selected.
Social releasers	Innate "cute" behaviours and features in the infant — large eyes, smiling, cooing, crying, a rounded face — that automatically *release* caregiving responses in adults. These activate the mammalian attachment system and ensure adults respond to the infant's needs.
Critical period	A biologically determined window — roughly 0–2½ years, with a sensitive period extending to around 5 years — during which the attachment must form. If no attachment forms in this period, Bowlby argued, the child will struggle to form attachments later in life.
Monotropy	The idea that one attachment — typically (but not always) to the biological mother — is qualitatively different from and more important than all others. This *primary attachment figure* provides the template for all future relationships.
Internal working model (IWM)	A mental representation of the self, the attachment figure and the relationship between them. This template shapes the child's expectations of future relationships — including friendships, romantic relationships and their own parenting. Children who experience a secure attachment develop an IWM that expects relationships to be loving and reliable.

> **INTERNAL WORKING MODEL — AQA DEFINITION**
>
> An internal framework, theorised by Bowlby, that is formed by a child's interactions with their primary caregiver and remains as a reference for understanding the world, the self and future relationships.

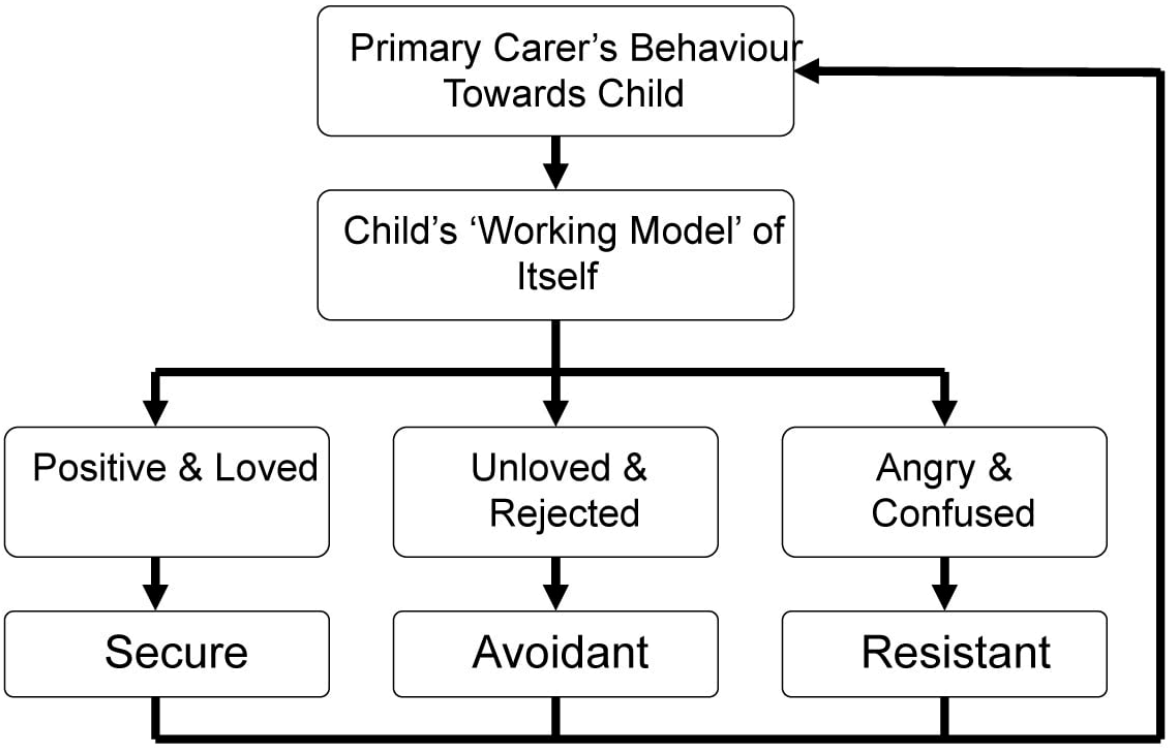


Figure 3.1 — Bowlby's internal working model. The template formed in the first attachment shapes expectations of all future relationships — childhood friendships, adult romantic partnerships and the individual's own parenting (see Section 8).

Evaluation

Strength — supporting evidence for the internal working model (Bailey et al. 2007). A key strength of Bowlby's theory is research support for the IWM. Bailey et al. (2007) assessed the attachment classification of 99 mothers and their one-year-old infants and found a strong intergenerational concordance: mothers with poor attachments to their own parents were more likely to have insecurely attached infants. This is important because it directly supports Bowlby's claim that the IWM established in the first attachment shapes parenting behaviour decades later. This therefore strengthens the validity of the IWM as a real psychological mechanism, not just a theoretical construct.

Strength — supporting evidence from animal studies (Lorenz; Harlow). A further strength is convergent support from animal research. Lorenz's geese demonstrated the existence of a biologically programmed critical period, and Harlow's monkeys showed that contact comfort — not food — is the basis of attachment, exactly as Bowlby's evolutionary account predicts. This is important because findings from independent species converge on the same conclusion: attachment is innate, time-limited and serves a non-feeding function. This strengthens the cross-species validity of Bowlby's theory and supports its evolutionary basis.

Limitation — monotropy may not be universal. A significant limitation is that monotropy may not apply to all infants. Schaffer and Emerson (1964) found that a minority of infants formed *multiple* primary attachments simultaneously rather than one preferential bond. Van Ijzendoorn and Sagi (2001) also found that monotropy is scarce in **collectivist cultures**, where children are routinely raised by extended kin networks. This is important because if monotropy were a biologically universal feature, it should appear in all cultures and infants. This is an example of **cultural bias** (imposed etic) and limits the universality of Bowlby's claim.

Limitation — socially sensitive research. Bowlby's emphasis on the primary caregiver — typically the mother — is highly **socially sensitive**. It has historically been used to argue that working mothers who return to employment early may damage their child's attachment, placing significant social pressure on mothers. This is important because it raises **ethical implications** for how psychological research is communicated — Bowlby's findings have shaped policy on day care, parental leave and even childcare guilt in ways that can disadvantage women. This is a limitation not of the science but of its social use.

Limitation — the critical period may be a sensitive period (Rutter 1981). A further limitation is that the "critical" period may be better described as a "sensitive" period. The case of the Czech twins reported by Koluchova (1976) — who suffered seven years of severe deprivation but later recovered fully through good fostering — and findings from the English and Romanian Adoptees study (Section 7) suggest that recovery is possible even after the supposed critical period. This is important because it weakens Bowlby's strong claim that failure to attach in the critical period is irreversible, and supports a more flexible developmental view.

Application — real-world value. Bowlby's theory has shaped attachment-based parenting interventions, social-work policy on adoption (favouring early placement) and the design of foster-care systems. These applications have measurable benefits for child outcomes, supporting the underlying theory's validity. The economic implications are significant: early intervention to support secure attachment reduces long-term mental-health costs and improves educational outcomes.

Conclusion. Bowlby's monotropic theory remains the dominant theoretical framework in attachment research. Convergent evidence from animal studies, cross-generational data and applied success strongly support it, although monotropy as a universal feature and the strong critical-period claim require qualification in light of cross-cultural and adoption research.

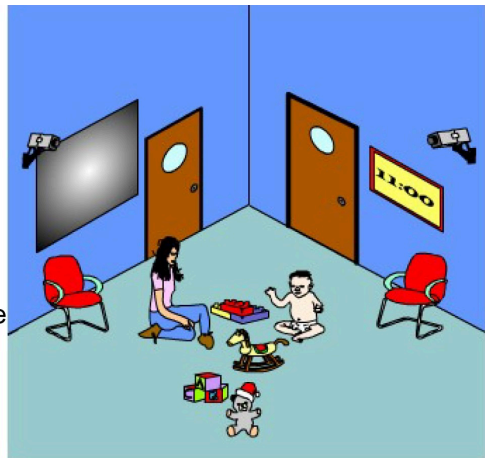
4 Ainsworth's Strange Situation

Mary **Ainsworth (1969, 1978)** devised the **Strange Situation** to assess the security of an infant's attachment to a caregiver. It is a **controlled observation** in a laboratory playroom, observed through a two-way mirror. Infants are placed in mildly stressful situations to observe four key behaviours: **separation anxiety, stranger anxiety, willingness to explore (use of caregiver as a safe base)** and **reunion behaviour**.

STAGES

1 + 2

Mum and infant go into room to get used to it before the obs. begins



The Strange Situation laboratory playroom — observed through a two-way mirror.

Episode	Persons Present	Duration	Description
1	Mother, Infant, Observer	30 seconds	Observer introduces mother and baby to experimental room, then leaves.
2	Mother, Infant	3 minutes	Mother is nonparticipant while baby explores. If necessary, play is stimulated after 2 min.
3	Stranger, Mother, Infant	3 minutes	Stranger enters, Min. 1: stranger silent; Min. 2: stranger talks with mother; Min 3: stranger approaches baby. After 3 min., mother leaves.
4	Stranger, Infant	3 min or less	First separation episode. Stranger's behavior is geared to that of baby.
5	Mother, Infant	3 min or more	First reunion episode. Mother greets and comforts baby, then tries to settle baby into play. Mother then leaves, waves byebye.
6	Infant	3 min or less	Second separation episode.
7	Stranger, Infant	3 min or less	Continuation of second separation. Stranger enters and gears behavior to that of baby.
8	Mother, Infant	3 minutes	Second reunion episode. Mother enters, greets baby. Stranger leaves.

The sequence of seven three-minute episodes used to assess attachment security.

The Procedure — Seven Three-Minute Episodes

Episode	Description	Behaviour assessed
1	Caregiver and infant enter the playroom; caregiver sits, infant explores.	Use of caregiver as a safe base
2	Stranger enters, talks to caregiver, then approaches the infant.	Stranger anxiety
3	Caregiver leaves the room; stranger and infant remain.	Separation anxiety; stranger anxiety
4	Caregiver returns; stranger leaves.	Reunion behaviour
5	Caregiver leaves; infant is alone.	Separation anxiety
6	Stranger returns.	Stranger anxiety
7	Caregiver returns; stranger leaves.	Reunion behaviour

The Three Attachment Types

Type	Behaviour	Approx. %
Secure (Type B)	Moderate separation and stranger anxiety; uses the caregiver as a safe base to explore; readily accepts comfort and is easily soothed on reunion. Caregivers tend to be **sensitively responsive**.	~66%
Insecure-avoidant (Type A)	Little separation or stranger anxiety; explores freely without using the caregiver as a safe base; *avoids* contact on reunion. Caregivers are often **emotionally unavailable** or rejecting.	~22%
Insecure-resistant (Type C)	Extreme separation and stranger anxiety; explores very little; on reunion, the infant seeks contact but simultaneously *resists* it (e.g. raising arms then pushing away). Caregivers are often **inconsistent**.	~12%

EXAM TIP — TYPE A VS TYPE C

Many students mix up insecure-avoidant and insecure-resistant. Remember: **avoidant = low everything** (no anxiety, no contact-seeking, no protest). **Resistant = high everything** (high anxiety, wants contact AND rejects it). The 2025 spec includes only these three types — disorganised attachment (Type D, Main and Solomon 1986) is sometimes referenced as a critical addition but is not in the AQA spec.

Evaluation

Strength — high inter-rater reliability. A major strength of the Strange Situation is its excellent inter-rater reliability. Bick et al. (2012) found inter-rater agreement of **0.94** when independent observers coded the same set of Strange-Situation tapes. This is important because it shows the categorisation of behaviour into the three types is consistent across coders, suggesting the procedure is producing genuine measurements rather than subjective impressions. This strengthens the reliability of the Strange Situation as a standardised assessment tool.

Strength — predictive validity. A further strength is the procedure's strong predictive validity. Securely attached infants tend to show better outcomes in childhood (peer competence, fewer behavioural problems), adolescence (closer friendships) and adulthood (more stable romantic relationships) — see McCarthy (1999), Hazan and Shaver (1987). This is important because if the Strange Situation classifications are predicting meaningful outcomes 20+ years later, the procedure is genuinely measuring something psychologically important about the child's attachment. This supports the construct validity of the three Ainsworth types.

Limitation — culture-bound (imposed etic). A serious limitation is that the Strange Situation is **culture-bound** — it was developed in middle-class American samples and assumes Western individualist child-rearing norms (e.g. that infants will be moderately distressed by brief separation). When applied to Japanese, German or Israeli samples, very different distributions of attachment type emerge (see Section 5). This is important because if the same behaviour means different things in different cultures, the Strange Situation cannot be used as a universal measure. This is an example of **imposed etic** — assuming a Western measure works everywhere — and limits the procedure's external validity.

Limitation — measures only one relationship. A further limitation is that the Strange Situation assesses only one specific caregiver–infant dyad — typically mother–infant. The same infant may have a different attachment classification with the father, a grandparent or a daycare worker (Main and Weston 1981). This is important

because using one relationship to classify the child overall risks labelling the *relationship* rather than the *child*. This therefore limits the procedure's construct validity as a measure of the child's overall attachment "type".

Limitation — ethical concerns. A further limitation is the deliberate creation of distress. By design, the Strange Situation places infants in increasingly stressful episodes — separation from caregiver, exposure to a stranger, being left alone — and roughly 20% of infants become severely distressed. This is important because the BPS code requires protection from harm, and deliberately distressing infants for research purposes requires a careful cost–benefit justification. The procedure's enormous influence on developmental psychology and applied practice provides that justification, but the ethical issue remains genuine.

Limitation — disorganised attachment (Main and Solomon 1986). Some researchers argue that Ainsworth's three categories are *incomplete*. Main and Solomon (1986) identified a fourth type — **disorganised attachment (Type D)** — characterised by inconsistent, contradictory behaviour, often associated with abuse or maltreatment. This is important because around 15% of infants do not fit neatly into Ainsworth's three categories. The 2025 AQA spec does not include Type D, but its existence in the broader literature shows that the Ainsworth typology may not capture the full range of attachment patterns.

5 Cultural Variations in Attachment

Cultural variations in attachment ask whether the distribution of secure / insecure-avoidant / insecure-resistant attachment is the same across cultures, or whether different child-rearing practices produce different attachment patterns. The key study is **van Ijzendoorn and Kroonenberg (1988)**.

van Ijzendoorn and Kroonenberg (1988) — Meta-Analysis

Feature	Detail
Aim	To investigate cross-cultural variation in attachment types using the Strange Situation, and to compare inter-cultural with intra-cultural variation.
Procedure	Meta-analysis of **32 studies** using the Strange Situation, across **8 countries**, including a combined sample of **1,990 children**. Studies included the USA (18), Germany (3), Holland (4), Japan (2), Israel (2), China (1), UK (1) and Sweden (1).
Findings	**Secure attachment** was the most common in every country (50–75%). The lowest rate was in China (50%); the highest in the UK (75%). **Insecure-avoidant** was most common in *individualist* Western cultures, especially Germany (35%). **Insecure-resistant** was most common in *collectivist* cultures — Japan (27%) and Israel (29%). **Variation within** cultures was 1.5 times greater than variation **between** cultures.
Conclusion	Secure attachment appears to be a near-universal "norm" across cultures, supporting Bowlby's claim that attachment is innate and biologically based. However, the type of insecure attachment varies systematically with cultural child-rearing practices — for example, German parents encourage early independence (more avoidant), while Japanese infants rarely experience separation from the mother (more resistant when finally separated).

Other Cross-Cultural Studies

- **Simonella et al. (2014)** — only 50% of 12-month-old Italian infants were classified as securely attached, lower than the global average. The researchers attributed this to changing cultural and social expectations of mothers, including increased use of professional childcare.
- **Jin et al. (2012)** — 87 Korean infants assessed using the Strange Situation; the vast majority of insecurely attached children were classified as insecure-resistant rather than insecure-avoidant, matching the Japanese pattern and supporting the role of collectivist child-rearing in shaping attachment patterns.

Evaluation

Strength — large sample size and statistical power. A major strength of van Ijzendoorn and Kroonenberg's meta-analysis is the very large combined sample of 1,990 infants across 32 studies. This is important because it gives high statistical power and reduces the influence of any single study's anomalies. This therefore increases the reliability of the conclusion that secure attachment is the most common type in every country, strengthening the case for a universal, biologically based human attachment system as Bowlby proposed.

Limitation — confounds country with culture. A significant limitation is that the meta-analysis treated each country as a single "culture", but countries are not monolithic. Multiple subcultures exist within each country — Sagi et al. (1991) found, for example, that Israeli infants raised on collective kibbutzim showed very different attachment distributions from urban Israeli infants. This is important because if attachment patterns vary as much within a country as between countries, then the meta-analysis is really studying inter-country variation rather than inter-cultural variation. This weakens the validity of conclusions about "culture" specifically.

Limitation — imposed etic (cultural bias). A serious limitation is the use of the Strange Situation itself across cultures. The procedure was designed in the USA and assumes Western individualist norms — that infants will experience moderate distress on brief separation. In Japan, where infants are rarely separated from their mothers, the extreme distress shown is not necessarily a sign of insecure-resistant attachment but a culturally appropriate response to an unusual situation. This is an example of **imposed etic** and means the Strange Situation may not validly measure attachment in non-Western contexts. This is an important issues-and-debates limitation that constrains the cross-cultural validity of the entire approach.

Limitation — sample bias within studies. A further limitation is that the data was unevenly distributed across countries — 18 of the 32 studies came from the USA, while 1 study each came from China, the UK and Sweden. This is important because conclusions about "Chinese", "British" or "Swedish" attachment patterns are based on small, potentially unrepresentative samples that cannot be safely generalised. This further restricts the reliability of cross-cultural comparisons.

Strength — supports universality and cultural-specificity together. Despite these limitations, a clear strength is that the findings simultaneously support *universality* (secure attachment is most common everywhere) and *cultural specificity* (the type of insecure attachment varies with child-rearing practice). This is theoretically important because it supports a moderate **interactionist** view: attachment is biologically prepared but expressed through culturally specific caregiving. This strengthens the explanatory power of attachment theory across human populations.

Conclusion. Overall, van Ijzendoorn and Kroonenberg's meta-analysis provides strong evidence that secure attachment is a near-universal human pattern, while differences in the type of insecure attachment reflect cultural child-rearing practices. However, methodological concerns about imposed etic, sample imbalance and confounding of country with culture mean cross-cultural conclusions must be drawn cautiously.

6 Bowlby's Theory of Maternal Deprivation

> **MATERNAL DEPRIVATION (AQA DEFINITION)**
>
> **Bowlby's theory of maternal deprivation** proposes that prolonged or repeated separation from the primary attachment figure (typically the mother) during the **critical period** for attachment formation causes permanent emotional, intellectual and social deficits in the child.

Bowlby (1951) drew a key distinction between **separation**, **deprivation** and **privation**:

- **Separation** — short-term physical absence of the caregiver (e.g. nursery, brief hospital stay). Often distressing but generally reversible.
- **Deprivation** — the loss of emotional care for an extended period, even if the caregiver is physically present (e.g. parent severely depressed). Bowlby believed this caused lasting harm during the critical period.
- **Privation** — the complete failure to form any attachment at all (e.g. institutional care from birth). Bowlby and later Rutter argued this is the most damaging.

Consequences of Maternal Deprivation

Bowlby argued that prolonged separation from the primary attachment figure during the critical period (0–2½ years, with effects extending up to 5 years) produces:

- **Affectionless psychopathy** — an inability to feel guilt, empathy or strong emotion for others; associated with criminal behaviour.
- **Delinquency** — antisocial behaviour and criminal offending in adolescence and adulthood.
- **Intellectual / cognitive deficits** — reduced IQ and developmental delays.
- **Damaged internal working model** — distorted expectations of relationships that affect later parenting and intimacy.

Key Study — Bowlby's 44 Juvenile Thieves (1944)

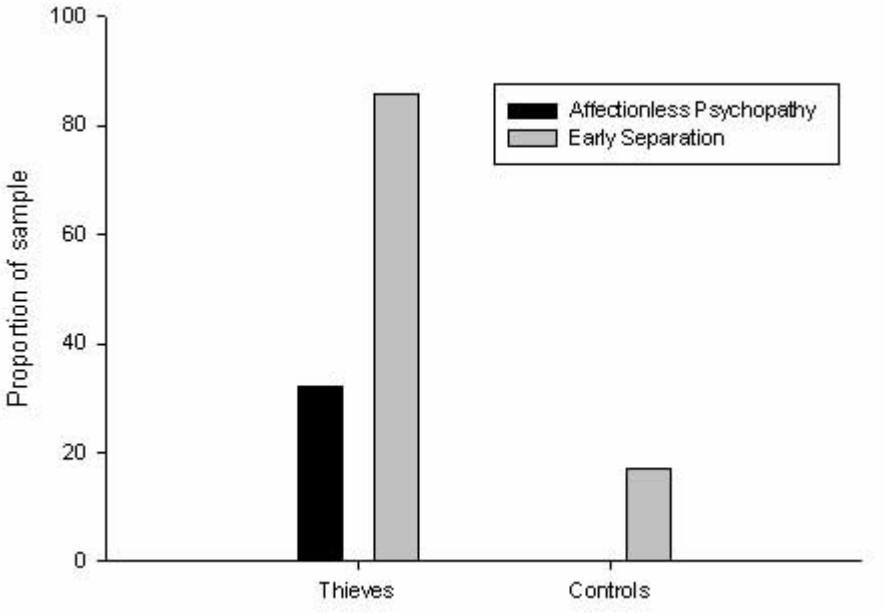


Figure 6.1 — Bowlby's (1944) 44 Juvenile Thieves study. 12 of the 14 thieves classified as "affectionless psychopaths" had experienced prolonged early separation from the mother, compared to only 2 of the remaining 30 thieves and 2 of the 44 controls — Bowlby's original basis for the maternal-deprivation hypothesis.

Feature	Detail
Aim	To investigate whether early separation from the mother is associated with later criminal behaviour and "affectionless psychopathy".
Procedure	Bowlby interviewed 44 young people referred to a child-guidance clinic for stealing, and 44 emotionally disturbed non-offenders as a control. He assessed whether each had experienced early prolonged separation (more than six months) from the mother before the age of five.
Findings	14 of the 44 thieves were identified as **"affectionless psychopaths"**. Of these, **12 (86%)** had experienced prolonged separation from the mother in the first two years of life. By contrast, only **2 of the remaining 30** thieves had experienced such separation, and only **2 of the 44 controls** had.
Conclusion	Bowlby concluded that prolonged early separation causes affectionless psychopathy, which in turn leads to delinquency. This was the basis of his theory of maternal deprivation.

Evaluation

Strength — enormous applied influence. A genuine strength is the substantial applied impact of Bowlby's theory. It reformed hospital policies — parents were previously not allowed to stay with sick children, and Bowlby's work led to open visiting and parental rooming-in for hospitalised infants. It also reshaped adoption policy in favour of early placement and influenced social-work practice on family separations. This is important because applied success across multiple institutions is itself indirect evidence that the underlying mechanism is real. This strengthens the practical value of Bowlby's theory even where its strong causal claims are contested.

Limitation — confounds deprivation and privation (Rutter 1981). A major theoretical limitation, raised by Rutter (1981), is that Bowlby conflated *separation*, *deprivation* and *privation*. Many of the children in the 44 Thieves study had not just been separated from their mothers but had experienced the complete failure to form

any attachment at all — privation. This is important because privation has very different effects from temporary separation, and lumping them together inflates the apparent damage caused by maternal separation. This weakens the validity of Bowlby's strong claim that any prolonged separation during the critical period causes lasting harm.

Limitation — methodological weaknesses of the 44 Thieves study. A further limitation is that the 44 Thieves study has serious methodological problems. Bowlby himself conducted the interviews, raising the risk of **investigator effects** and **researcher bias** — he knew which children had been separated and may have unconsciously led the interviews. The data on early separations relied on parents' retrospective recall, which is vulnerable to memory distortion. This is important because if the central study supporting the theory is methodologically flawed, the causal claim cannot be safely drawn. This significantly weakens the empirical basis of maternal-deprivation theory.

Limitation — counter-evidence (Lewis 1954). A further limitation is direct contradictory evidence. Lewis (1954) replicated the 44 Thieves with a much larger sample of 500 young people and found *no* link between early maternal separation and either affectionless psychopathy or delinquency. This is important because Lewis's larger and more representative study fails to find the relationship Bowlby reported, suggesting Bowlby's original effect may have been an artefact of his sampling and methodology. This further undermines the empirical case for maternal deprivation as a cause of later criminality.

Limitation — effects may be reversible (Koluchova 1976). A further limitation challenges Bowlby's claim that the effects of deprivation are irreversible. Koluchova (1976) reported the case of Czech twin boys who suffered seven years of severe abuse and isolation but, after rescue at age seven and good fostering, made a full psychological recovery. This is important because if deprivation effects can be reversed even after the supposed critical period, the strong critical-period claim is wrong, and "critical" should be replaced with "sensitive". This supports Rutter's reformulation and the ERA findings (Section 7).

Limitation — socially sensitive (ethical implications). A further limitation is the **socially sensitive** nature of the theory. By identifying the mother specifically as the source of attachment harm, Bowlby's theory has historically been used to discourage working mothers and to attribute blame to mothers when children develop problems. This is important because findings can shape social policy in ways that disadvantage particular groups — in this case, women. This is an issues-and-debates limitation that concerns how psychological theory is used, not just its scientific accuracy.

Conclusion. Bowlby's theory of maternal deprivation has had immense applied influence, but its strong causal claims are not well supported by the original 44 Thieves data and are contradicted by later research. The most defensible reformulation — accepting that disrupted early attachment carries some risk but is not necessarily irreversible, and that privation is more damaging than separation — is supported by the ERA findings considered in the next section.

7 Effects of Institutionalisation: The English and Romanian Adoptees Project

> **INSTITUTIONALISATION (AQA DEFINITION)**
>
> **Institutionalisation** refers to the long-term effects of growing up in an institution (e.g. an orphanage, residential children's home) and being unable to form a secure attachment with a primary caregiver. It is a form of **privation** — the complete failure to form an attachment.

Following the fall of the Romanian Ceauşescu regime in 1989, around 100,000 children were found in extremely deprived state orphanages. Many were adopted internationally, providing psychologists with a rare natural experiment to study the long-term effects of early institutional privation.

Rutter et al. (1998, 2007, 2011) — English and Romanian Adoptees (ERA) Project

Feature	Detail
Aim	To investigate the extent to which good subsequent care can compensate for early severe institutional privation, and whether the effects depend on age of adoption.
Procedure	A longitudinal study of **165 Romanian orphans** adopted by families in the UK, compared with a control group of **52 British children** adopted in the UK before the age of 6 months. The Romanian children were assessed at **ages 4, 6, 11 and 15** on physical, cognitive and emotional development.
Findings	On arrival, half of the Romanian adoptees showed signs of severe developmental delay and undernutrition; their mean IQ was around 50 (compared to ~100 in the UK controls). By age 11, mean IQ depended sharply on the age of adoption: **102** for those adopted before 6 months, **86** for those adopted between 6 months and 2 years, and **77** for those adopted after 2 years. Children adopted after 6 months showed **disinhibited attachment** — over-friendliness with strangers and attention-seeking — and difficulty with peer relationships.
Conclusion	The effects of institutional privation are not inevitable but depend on the **age of adoption**. Children adopted before 6 months largely recovered to control levels; those adopted later showed lasting cognitive and emotional impairment. This supports a *sensitive period* rather than a strict critical period: recovery is possible if good care is provided early enough.

Zeanah et al. (2005) — Bucharest Early Intervention Project

A converging study by Zeanah et al. (2005) used the Strange Situation with **95 Romanian children** aged 12–31 months who had spent most of their lives in institutional care, compared with a control group of **50 children** who had never been institutionalised. Only **19%** of the institutionalised group were securely attached (vs **74%** of controls), and **65%** showed **disorganised attachment**. The findings strongly support the role of early care in the formation of secure attachment.

Effects of Institutionalisation

- **Disinhibited attachment** — over-familiarity and attention-seeking towards any adult, including strangers. Thought to result from having many caregivers and no opportunity to form a selective primary attachment.
- **Mental retardation / lower IQ** — particularly marked in children adopted after 6 months.
- **Physical underdevelopment** — deprivation dwarfism caused by emotional and nutritional neglect.
- **Difficulty forming peer relationships** — observed in adolescence in the ERA cohort.

Evaluation

Strength — high internal validity (control of confounds). A major strength of the ERA project is its high internal validity compared to earlier institutionalisation research. Earlier studies (e.g. Hodges and Tizard 1989) used children who had often experienced trauma, abuse and bereavement *before* institutional care, confounding the effects of institutionalisation with other variables. The ERA children entered the institutions shortly after birth in good health, allowing the effects of institutionalisation itself to be isolated. This is important because it allows confident causal inference about the role of institutional care in developmental outcomes. This strengthens the validity of conclusions about the sensitive-period nature of recovery.

Strength — longitudinal design. A further strength is the use of a longitudinal design that has followed the Romanian adoptees from infancy into adolescence (ages 4, 6, 11 and 15). This is important because short-term snapshots of development can be misleading: some children show early improvement that does not persist, and others show "sleeper" effects that only emerge later. The longitudinal data allow researchers to track recovery and to identify which deficits persist into adolescence — providing a much richer understanding of institutionalisation than a single-time-point study.

Strength — major applied value (adoption policy). A clear strength is the ERA project's enormous applied value. The findings directly support early adoption (preferably before 6 months) and have informed national adoption policy in the UK, the US and elsewhere by speeding up adoption processes for institutionalised infants. This is important because applied success in social policy delivers measurable benefits — improved life chances for adopted children, reduced costs of long-term mental-health and educational support. This illustrates the real-world economic and human value of attachment research.

Limitation — limited generalisability (extreme conditions). A significant limitation is that the Romanian orphanages were exceptionally poor — extreme neglect, abuse, no intellectual stimulation, no consistent caregivers, no toys. This is important because the findings may not generalise to milder forms of institutional care such as well-run modern care homes or short-term foster placements. This limits the external validity of the ERA conclusions: institutionalisation in less severe settings may have less severe effects, and Rutter's findings should not be applied indiscriminately to all institutional settings.

Limitation — confounding variables remain. A further limitation is that, even with the ERA design, some confounds remain. Romanian orphans suffered not only emotional privation but also severe malnutrition, lack of cognitive stimulation, and (in some cases) physical abuse. This is important because it is difficult to attribute the cognitive deficits specifically to the absence of an attachment figure rather than to nutritional or sensory deprivation. This restricts the strength of causal conclusions about *attachment* per se.

Limitation — ethical implications and socially sensitive research. A further limitation is the **socially sensitive** nature of the findings. Although the ERA findings have improved adoption practice, they can also stigmatise late-adopted children and their families, who may face raised expectations of difficulty. This is

important because how findings are communicated to social workers, adoptive families and the public has significant consequences for the children involved. Researchers therefore have an ethical responsibility to present findings as probabilistic (some children recover even after late adoption) rather than deterministic.

Conclusion. Overall, the ERA project provides the strongest available evidence that the effects of institutional privation depend on age at adoption — supporting a sensitive-period model and offering a clear scientific basis for early-adoption policy. The findings refine, rather than wholly support, Bowlby's strong critical-period claim and demonstrate the genuine real-world value of attachment research.

8 Influence of Early Attachment on Childhood and Adult Relationships

Bowlby's **continuity hypothesis** proposes that the quality of early attachment shapes all later relationships — childhood friendships, romantic partnerships and even the way the individual parents their own children. The mechanism is the **internal working model (IWM)**: the mental template of self, attachment figure and relationships built during the first attachment.

The Internal Working Model and Later Relationships

- **Securely attached** children develop a positive IWM — expectations of relationships as loving, available and reliable. They tend to form close friendships in childhood and stable, trusting romantic relationships in adulthood.
- **Insecure-avoidant** children develop an IWM that expects relationships to be emotionally distant. As adults, they may struggle with intimacy and rely on themselves rather than partners.
- **Insecure-resistant** children develop an IWM that expects relationships to be inconsistent. As adults, they may be clingy, anxious about abandonment, and have difficulty trusting partners.

Key Studies

Hazan and Shaver (1987) — The Love Quiz

Hazan and Shaver placed a "love quiz" in an American newspaper, asking adults about their current most important romantic relationship and their childhood relationship with parents. **620 responses** were analysed. The proportions of securely / avoidantly / resistantly attached adults matched the proportions Ainsworth had identified in infants: roughly **56% secure, 25% avoidant, 19% resistant**. Securely attached adults reported happier, longer-lasting relationships and a positive view of love; avoidant adults feared intimacy; resistant adults reported emotional extremes and obsessive preoccupation. This supported continuity from infant attachment to adult romantic style.

Bailey et al. (2007) — Intergenerational Transmission

Bailey et al. assessed the attachment classifications of **99 mothers** with their one-year-old infants (using the Strange Situation) and with their own mothers (using the Adult Attachment Interview). The majority showed the *same* classification in both relationships — mothers with poor attachments to their own parents were more likely to have insecurely attached infants. This is direct evidence that the IWM is transmitted across generations.

Fraley (1998) — Meta-Analysis

Fraley's meta-analysis of longitudinal studies found correlations of around **+0.50** between infant attachment classification and later attachment style — moderate but not perfect continuity. Some attachment styles (particularly insecure-resistant) were less stable than others, suggesting that early attachment shapes but does not determine later relationships.

Simpson et al. (2007) — Longitudinal Study

Simpson et al. followed participants from infancy through adulthood and found that securely attached infants were rated as more socially competent in childhood, had closer friendships in adolescence and were more emotionally expressive in adult romantic relationships. This supports the continuity of attachment effects across the life span.

Evaluation

Strength — strong supporting evidence (Bailey et al. 2007). A major strength of the continuity hypothesis is supporting evidence from Bailey et al. (2007). The intergenerational match between mothers' attachment to their own parents and their infants' attachment classification provides direct evidence that the internal working model influences parenting decades after it is formed. This is important because it operationalises Bowlby's abstract claim about the IWM with measurable, replicable data. This therefore strengthens the validity of the continuity hypothesis as a real psychological mechanism.

Strength — converging evidence from multiple studies. A further strength is the convergence of evidence across multiple methodologies — Hazan and Shaver's questionnaire, Bailey's mother–infant pairs, Fraley's meta-analysis and Simpson et al.'s longitudinal data all support the link between early attachment and later relationships. This is important because findings that replicate across different designs and samples are more likely to reflect a genuine effect than a methodological artefact. This strengthens the overall validity of the continuity hypothesis.

Limitation — correlation does not prove causation. A significant limitation is that most evidence is correlational. Hazan and Shaver, Bailey et al. and Fraley all show that early attachment correlates with later relationship style — but this does not show that early attachment *causes* later outcomes. **Kagan's (1984) temperament hypothesis** argues that an innate biological disposition (e.g. easy vs difficult temperament) shapes *both* the early attachment style and later relationship quality. This is important because if temperament is a confounding variable, attachment may simply be a marker rather than a cause of later outcomes. This weakens the strong causal claim of the continuity hypothesis.

Limitation — self-report and retrospective methods (Hazan and Shaver). A further limitation is that key studies rely on retrospective self-report. Hazan and Shaver's "love quiz" asked adults to recall their childhood attachment relationships, which is vulnerable to **memory distortion**, **social desirability bias**, and reinterpretation in light of current relationship status. The use of a voluntary newspaper sample also introduces **volunteer bias** — happily attached readers may have been more motivated to respond. This is important because it limits the population validity and reliability of the love-quiz findings as evidence for continuity.

Limitation — risk of determinism (free will–determinism debate). A further limitation is that the continuity hypothesis can be interpreted in a **deterministic** way — implying that insecurely attached infants are "doomed" to poor adult relationships. This is important because it ignores the genuine role of life experience, therapy and personal agency in changing relationship patterns. The Czech-twins case and ERA findings show that even very early disruption can be partly overcome with good later experiences. This issues-and-debates limitation cautions against over-interpreting the continuity hypothesis as a deterministic life script.

Limitation — socially sensitive research. Like Bowlby's broader theory, the continuity hypothesis is **socially sensitive**. Telling parents that their child's early attachment "predicts" future relationships can create guilt and anxiety, particularly in mothers, and can be used to justify intrusive social-work interventions. This is important because it raises ethical implications about how research findings are communicated. Researchers have a responsibility to present continuity as probabilistic rather than fixed.

Application — interventions and economic value. Despite these limitations, the continuity hypothesis has clear applied value. Early-attachment interventions (e.g. Circle of Security, video-feedback intervention) help insecurely attached parent–child dyads develop more secure patterns, with measurable improvements in child outcomes. The economic case is strong: secure attachment predicts better educational achievement, better mental health and lower involvement with social services, reducing long-term public costs. This supports continued investment in early-attachment work as an evidence-based application of psychological research.

Conclusion. Overall, the continuity hypothesis is well supported as a probabilistic claim — early attachment significantly shapes later relationships through the internal working model — but is best treated as one influence among several (temperament, life experience, relationship history) rather than as a deterministic blueprint. Used carefully, the theory has clear applied and economic value in supporting early intervention.

These revision notes were prepared for Simply Psychology and cover spec sections 3.1.3 (AS) and 4.1.3 (A-level) of the AQA Psychology 2025 specification. Definitions of *attachment, critical period, internal working model, monotropy, maternal deprivation, institutionalisation* and the three Strange-Situation types follow AQA's official *Subject specific vocabulary*. For deeper coverage of any topic, see the corresponding article at simplypsychology.org/a-level-attachment.html.