

AQA Psychology A-level

Option 1: Gender

Summary Notes

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Part 1 — Biological Sex: Chromosomes and Hormones

Biological sex is influenced by **chromosomes and hormones**.

Chromosomes carry our genetic information, while hormones act as **chemical messengers** that influence the development and functioning of the body. During fetal development, chromosomes and hormones play an important role in the development of the **reproductive system and sex characteristics**

1. Chromosomes

Humans usually have **46 chromosomes arranged in 23 pairs**. The first 22 pairs are called **autosomes**, while the 23rd pair are the **sex chromosomes**.

- The typical female pattern is **XX**.
- The typical male pattern is **XY**.

The **Y chromosome** contains the **SRY gene**. When SRY is activated during fetal development, it triggers a series of genetic processes that lead to the development of the **testes**. The developing testes then produce hormones, including **testosterone**, which contribute to the development of male reproductive structures and other male sex characteristics.

In a typical XX pattern, the absence of the SRY gene means that the testes-development pathway is not activated, and the gonads develop as **ovaries**. Therefore, chromosomes influence biological sex partly by affecting the development of the reproductive organs and the hormones produced by the developing gonads.

2. Testosterone

Testosterone is an androgen, or male sex hormone. It is produced mainly by the **testes**, although smaller amounts are also produced by the adrenal glands.

Testosterone is important for the development of **male reproductive structures and secondary sex characteristics**. During fetal development, testosterone contributes to the development of the male reproductive system. Later in development, it contributes to characteristics such as:

- increased muscle mass
- facial and body hair
- a deeper voice.

Testosterone has also been investigated in relation to **aggression**. Research suggests that higher testosterone levels can be associated with greater aggression in some circumstances, although this relationship is **not simple or deterministic**.



3. Oestrogen

Oestrogen is a group of hormones involved in female reproductive development and functioning. It is produced mainly by the **ovaries**, although smaller amounts are produced elsewhere in the body.

Oestrogen contributes to the development of **female reproductive structures and secondary sex characteristics**. It also plays an important role in the **menstrual cycle, reproductive functioning and pregnancy**.

4. Oxytocin

Oxytocin is a hormone involved in **reproduction and social bonding**. It is produced in the hypothalamus and released by the pituitary gland.

Oxytocin has several important roles in reproduction:

- It helps stimulate **contractions during childbirth**.
- It is involved in **milk release during breastfeeding**.
- It is associated with **parent–infant bonding and social attachment**.

Oxytocin is sometimes called the “**love hormone**” because of its association with bonding and social attachment. However, its effects are more complex than simply producing feelings of love or affection.



AO3 - EVALUATION

A strength of biological explanations of gender development is that they are **supported by research evidence**. **Dabbs et al. (1995)** found that offenders who had committed aggressive or sexually abusive crimes were more likely to have **higher levels of testosterone**. This is consistent with the role of testosterone in influencing characteristics such as aggression and supports the idea that **differences in hormonal concentrations may contribute to gender-related behaviour**. Therefore, research evidence provides support for the role of hormones in gender development.

A further strength of biological explanations is that **differences in hormonal concentrations can provide an explanation for differences between males and females**. The biological approach argues that the **types and concentrations of hormones present during development** influence the development of male and female characteristics. This provides a biological explanation for why males and females may develop different characteristics rather than assuming that these differences are entirely socially constructed. Therefore, **hormonal differences provide a possible biological basis for gender differences**.

A limitation of biological explanations is that they may **oversimplify gender development by ignoring social influences**. Explaining gender entirely in terms of chromosomes and hormones could be considered a form of **biological determinism**, as it suggests that gender-related behaviour is primarily determined by biological factors. In contrast, **Maccoby and Jacklin (1974)** highlighted the importance of social influences, while social learning theory suggests that children learn gender-appropriate behaviour by **observing and imitating role models**, influenced by mediational processes such as attention, retention, motivation and motor reproduction. Therefore, **gender development is likely to involve both biological and social influences**, rather than biology alone.

Another limitation of biological explanations is that they may provide a **scientific justification for gender discrimination**. **Brescoll and Uhlmann (2008)** argued that PMS can be viewed as a **social construct that medicalises female anger**, allowing women's behaviour to be dismissed as simply being "hormonal". This could reinforce stereotypes that women are less able to cope with stressful situations and potentially contribute to **discrimination**, such as assumptions that women are unsuitable for highly paid or stressful jobs. Therefore, biological explanations need to be used carefully so that evidence of biological differences is **not used to justify gender stereotypes or discriminatory practices**.



Part 2 — Diversity in Sex Development

The typical sex chromosome pattern is **XX in females and XY in males**. However, variations in sex chromosomes or in the body's response to sex hormones can result in **differences in sex development**.

Three examples are **androgen insensitivity syndrome**, **Klinefelter's syndrome** and **Turner's syndrome**.

1. Androgen Insensitivity Syndrome

Androgen insensitivity syndrome (AIS) occurs when an individual with an **XY chromosome pattern** has cells that are unable to respond fully or partially to **androgens**, such as testosterone.

- The individual has an **XY chromosome pattern** and develops testes, but the body's cells cannot respond normally to testosterone.
- In **complete AIS**, the individual typically develops **female external physical characteristics**, despite having XY chromosomes.
- The individual may have a **female gender identity**, although gender identity can vary.
- The condition demonstrates that **chromosomes and hormones do not always produce a straightforward male or female outcome**, because the body's response to hormones is also important in sex development.

2. Klinefelter's Syndrome

Klinefelter's syndrome occurs when a biological male has an **additional X chromosome**, giving the chromosome pattern **XXY**. Individuals therefore usually have **47 chromosomes rather than the typical 46**.

- The additional X chromosome can affect **physical and reproductive development**.
- Common characteristics include **tall stature, relatively long limbs, reduced facial and body hair, small testes and reduced testosterone production**.
- Some individuals develop **gynecomastia**, meaning increased breast tissue.
- Individuals may experience difficulties with **language, reading and some aspects of visuospatial processing**, although these characteristics vary between individuals.
- Klinefelter's syndrome demonstrates that **variations in sex chromosomes can influence physical, reproductive and psychological development**.



3. Turner's Syndrome

Turner's syndrome occurs when a female has **only one X chromosome**, rather than two. The chromosome pattern is usually written as **45,X**, meaning that the individual has **45 chromosomes rather than the typical 46**.

- Common physical characteristics include **short stature, a broad chest, a low hairline and a webbed neck**.
- The ovaries may not develop normally, which can result in **reduced fertility or infertility**.
- Some individuals require **hormone replacement therapy** to support normal development.
- Turner's syndrome can be associated with difficulties in **visuospatial processing and some aspects of social cognition**, although individuals can also show strengths in areas such as **verbal and reading abilities**.
- Some individuals with Turner's syndrome can become pregnant using **assisted reproductive techniques**, such as IVF with a donor egg, although pregnancy can involve significant medical risks.

	Androgen insensitivity syndrome	Klinefelter's syndrome	Turner's syndrome
Chromosome pattern	XY	XXY	45,X
Main difference	Cells cannot respond normally to androgens	Additional X chromosome	Missing one X chromosome
Typical sex development	Female external characteristics in complete AIS	Male	Female
Chromosome number	Usually 46	47	45
Examples of characteristics	Female external development despite XY chromosomes	Tall stature, reduced testosterone, possible gynecomastia	Short stature, reduced ovarian development
Cognitive/psychological characteristics	Variable	Possible language, reading and visuospatial difficulties	Possible visuospatial/social difficulties with relative verbal strengths



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A strength of research into Klinefelter's and Turner's syndromes is that it has **important practical applications**. An improved understanding of the **biological basis** of these syndromes can contribute to the development of effective treatments. For example, individuals with Turner's syndrome may be treated with **human growth hormone** to increase growth. This may reduce some of the physical difficulties associated with the condition and potentially improve **psychological and social wellbeing**. Therefore, research into atypical sex chromosome patterns has **real-world value** because it can improve the **quality of life of individuals with these conditions**.

A further strength is that research into Klinefelter's and Turner's syndromes has **improved understanding of individual differences**. Research shows that people with the same atypical sex chromosome pattern can have **very different psychological, behavioural and social outcomes**. For example, most males with Klinefelter's syndrome do not develop serious psychiatric disorders and can lead successful, independent lives, despite some individuals experiencing language or social difficulties. This challenges the assumption that an atypical chromosome pattern inevitably produces particular psychological characteristics. Therefore, research has helped psychologists develop a **more accurate and less deterministic understanding** of the effects of atypical sex chromosome patterns.

A limitation of biological explanations is that they may **make causal conclusions too quickly**. Psychological and behavioural differences associated with Klinefelter's and Turner's syndromes may be attributed directly to their **atypical chromosome patterns**, but this can overlook social influences and how individuals are treated by others. For example, difficulties with social communication in people with Turner's syndrome may partly result from **insecurity about physical appearance**, rather than being caused directly by the biological characteristics of the syndrome. Therefore, biological explanations may be an example of **biological determinism** if they assume that chromosome patterns directly cause psychological and behavioural characteristics.

Another limitation is that research into atypical sex chromosome patterns may have difficulty **determining what is "typical" and "atypical" behaviour**. The syndromes are often studied by comparing individuals with them to a **"typical" population**, but what is considered typical may depend on social and cultural expectations. For example, differences in **social skills** in people with Turner's syndrome may be judged against expectations of what is considered normal behaviour. This makes it difficult to establish an **objective standard** for deciding whether a characteristic is genuinely atypical. Therefore, conclusions about the psychological effects of atypical sex chromosome patterns may be influenced by **subjective definitions of normal behaviour**.



Part 3 — Gender Identities and Measuring Gender

Gender identity refers to a person's **internal sense of their own gender**. Gender is not necessarily limited to being male or female, and people may identify in different ways.

1. **Binary gender** refers to the classification of gender into two categories: **male and female**. A person with a binary gender identity identifies as either a man or a woman.
2. **Non-binary gender** refers to gender identities that do not fit exclusively into the categories of **male or female**. A non-binary person may identify as neither male nor female, as both, or as another gender identity.
3. **Gender fluidity** refers to a gender identity that can **change over time**. A gender-fluid person may experience their gender identity as changing between different identities or positions rather than remaining fixed.

Bem Sex Role Inventory

Bem (1974) developed the **Bem Sex Role Inventory (BSRI)** to measure **gender-role characteristics** and the extent to which individuals identify with characteristics traditionally associated with masculinity and femininity.

The BSRI contains **60 characteristics**:

- **20 masculine characteristics**
- **20 feminine characteristics**
- **20 neutral characteristics**

Participants rate how well each characteristic describes their personality using a **7-point Likert scale**. Their scores on the masculine and feminine characteristics are then used to classify them into **four categories**:

Category	Description
Masculine	High score on masculine characteristics and low score on feminine characteristics
Feminine	High score on feminine characteristics and low score on masculine characteristics
Androgynous	High scores on both masculine and feminine characteristics
Undifferentiated	Low scores on both masculine and feminine characteristics

Androgyny refers to having relatively high levels of both masculine and feminine characteristics, whereas **undifferentiated** refers to having relatively low levels of both.

The BSRI therefore measures **gender-role characteristics rather than biological sex**, reflecting the idea that masculinity and femininity can be considered **separate dimensions rather than opposite ends of one scale**.



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A strength of the Bem Sex Role Inventory is that there is **evidence supporting its reliability and validity**. Bem's original inventory was piloted with **1,000 students** who rated themselves on masculine, feminine and neutral characteristics. The classifications produced by the BSRI generally agreed with the students' **own perceptions of their personalities**, suggesting that the inventory has **good validity** because it measures characteristics that participants themselves identify with. When the inventory was administered again **one month later**, similar classifications were obtained, providing evidence of **test-retest reliability**. Therefore, the BSRI appears to be a **reliable and valid measure of gender-role characteristics**.

A further strength of the BSRI is that it **recognises that individuals can have both masculine and feminine characteristics**. Rather than forcing individuals into a simple male or female category, Bem's concept of **androgyny** recognises that a person can score highly on both masculine and feminine characteristics. This provides a more flexible way of measuring gender-related characteristics and is particularly relevant to understanding **gender diversity**, including individuals who may not identify with traditional masculine or feminine roles. Therefore, the BSRI helped psychologists move beyond **traditional assumptions that masculinity and femininity are opposite characteristics**.

A limitation of the BSRI is that it relies on **self-report and subjective judgements**.

Androgyny is a social construct, meaning that individuals may have different views about the extent to which particular characteristics describe them. Participants may also give answers that they believe are socially desirable rather than accurately reporting their characteristics. Therefore, the BSRI may be vulnerable to **response bias**, reducing the accuracy with which it measures gender-role characteristics.

Another limitation is that the BSRI may **oversimplify the complexity of gender and androgyny**. **Golombok and Fivush (1994)** argued that the BSRI does not consider other important aspects of gender, such as a person's **interests**. This suggests that measuring gender only through masculine and feminine personality characteristics provides an incomplete picture of gender identity. The **Personal Attributes Questionnaire (PAQ)** may therefore provide a broader measure because it assesses personality using dimensions such as **expressivity and instrumentality**. Therefore, the BSRI may have limited **construct validity** because it does not capture all aspects of gender.



Part 4 — Biological Explanations of Gender Development

Biological explanations suggest that **chromosomes and hormones can influence gender development**. These biological factors may affect **brain development and gender-typed behaviour**, although they do not necessarily determine gender completely.

1. Chromosomal Explanations

Chromosomes contain **genes that provide instructions for the development and functioning of the body**. Some genes influence the development of reproductive organs and the production and action of sex hormones. These biological differences can therefore influence the **physical and neurological development** that occurs during childhood and puberty.

For example, genes located on the sex chromosomes can influence the development of **male or female reproductive characteristics**. Through their effects on hormones, these genetic differences can also contribute to physical characteristics that tend to differ between males and females, including:

- **muscle development and muscle mass**
- **facial and body hair**
- **voice deepening**
- **breast development**
- **changes in body fat distribution**

These are examples of **secondary sex characteristics**, which are physical features that develop during **puberty** as a result of changing sex hormone levels.

These biological differences may also influence gender development indirectly. For example, differences in **physical development, strength or appearance** may affect how children experience themselves and how other people respond to them. These experiences could then contribute to the development of **gender-related behaviour and identity**.

Therefore, chromosomes may contribute to gender development by influencing **genes, hormones and physical development**, rather than directly determining whether someone develops a particular gender identity.



2. Hormonal Explanations

Hormonal explanations suggest that **sex hormones influence gender development**, particularly through their effects on the **developing brain**.

Testosterone and other androgens may be particularly important because exposure to these hormones during **prenatal development** can influence how the brain develops and becomes organised. This may involve changes to the development and functioning of **neural structures and pathways** involved in behaviour. As a result, differences in prenatal androgen exposure may contribute to differences in:

- **gender-typed behaviour**
- **interests and preferences**
- **activity choices**
- **aspects of later behaviour**

For example, greater exposure to prenatal androgens has been associated with more **male-typical play preferences**, such as greater interest in **rough-and-tumble play and toy vehicles**, and less interest in traditionally feminine toys such as dolls.

Hormones can also influence development later in life. During **puberty**, changes in testosterone, oestrogen and other hormones affect the brain and body. These changes can contribute to **sexual behaviour, motivation and other gender-related behaviours**.

Therefore, hormones may provide a **biological influence on gender development** by affecting both brain and behavioural development, but they do not necessarily determine gender identity. **Cognitive, social and cultural factors** can also influence how gender develops.



AO3 - EVALUATION

One strength of hormonal explanations is that they are **supported by research into prenatal hormone exposure**. **Berenbaum and Bailey (2003)** found that girls with congenital adrenal hyperplasia (CAH), who are exposed to higher levels of androgens before birth, showed greater interest in **male-typical toys and activities**, such as cars and rough-and-tumble play. This supports the idea that **prenatal androgen exposure can influence gender-typed behaviour**, as increased exposure to androgens was associated with differences in the girls' interests and activities. Therefore, the findings provide evidence that **hormonal influences during early development may contribute to later gender-related behaviour and preferences**.

One strength of hormonal explanations is that they are **supported by research into the effects of changing hormone levels**. **Van Goozen et al. (1995)** found that hormone treatment in transgender individuals was associated with changes in **aggression and sexual behaviour**. This suggests that changes in hormone levels can influence behaviour, as changes in the biological environment were followed by changes in psychological and behavioural characteristics. Therefore, the findings provide further support for the role of **hormones in psychological and behavioural development**.

One limitation of biological explanations is that they may be **biologically deterministic**. If chromosomes and hormones are viewed as the main causes of gender development, this could suggest that gender-related behaviour and identity are **largely predetermined by biology**. However, people with similar biological characteristics can develop different gender-related behaviours, interests and identities. This suggests that biological factors may create **predispositions rather than fixed outcomes**, with cognitive, social and cultural factors also influencing gender development.

One limitation of biological explanations is that it can be **difficult to establish cause and effect**. Much of the evidence for biological influences comes from **associations between biological factors and gender-related behaviour**. For example, finding a relationship between prenatal hormone exposure and male-typical play does not necessarily prove that the hormones caused the behaviour, because **genetic, environmental and social factors** may also contribute. Therefore, biological explanations may have difficulty demonstrating that a particular biological factor is the **direct cause of gender-related behaviour**, making it difficult to determine the extent to which biology is responsible for gender development.



Part 5a — Cognitive Explanations: Kohlberg's cognitive-developmental theory of gender development

Kohlberg (1966) proposed that children develop an understanding of gender through **three universal stages**. He argued that gender development occurs alongside **cognitive maturation**, drawing on Piaget's theory of cognitive development. As children's thinking becomes more advanced, their understanding of gender becomes increasingly accurate.

Stage	Age	What the child understands	Typical behaviour
1. Gender identity	2–3 years	Can identify their own gender , but may not correctly identify the gender of others. Does not understand that gender remains stable over time.	May believe that changing clothes or appearance can change someone's gender.
2. Gender stability	4–5 years	Understands that their own gender remains stable over time , but does not yet understand that gender remains stable for everyone regardless of appearance.	May think a boy with long hair could become a girl.
3. Gender constancy	Around 6 years	Understands that their own and other people's gender remains stable over time and across situations.	Seeks out and imitates same-sex role models and becomes more motivated to behave in gender-consistent ways. This can lead to the development of gender-role stereotypes .

Kohlberg therefore argues that children's **cognitive understanding of gender develops first**, which then motivates them to seek out and learn gender-appropriate behaviours.



AO3 - EVALUATION

A strength of Kohlberg's theory is that there is **research evidence supporting the stages of gender development**. **Slaby and Frey (1975)** found that children in Kohlberg's stage of gender stability paid more attention to and were more attracted to **same-sex models** than children in the earlier stage of gender identity. This supports Kohlberg's prediction that once children understand that their gender is stable, they become more motivated to seek out information that is consistent with their gender identity. Therefore, the findings provide **support for the idea that children's gender-related behaviour changes as their understanding of gender develops**.

A further strength of Kohlberg's theory is that it provides a **developmental explanation of gender identity**. The theory explains gender development as a progression through **gender identity, gender stability and gender constancy**, rather than suggesting that children simply learn gender roles through reinforcement or imitation. This provides a clear explanation of why children may initially identify their own gender before developing an understanding that gender remains stable over time. Therefore, Kohlberg's theory provides a **structured explanation of how children's understanding of gender develops**.

A limitation of Kohlberg's theory is that his research may have been affected by **methodological problems with the interviews**. Children as young as two or three may have lacked the **vocabulary and understanding** needed to accurately explain their ideas about gender. This could have produced inaccurate conclusions about their level of gender understanding. There may also have been **researcher bias**, as Kohlberg conducted the interviews himself and may have interpreted children's responses according to his expectations. Therefore, the stages may not accurately reflect children's actual understanding of gender and the research may have **low validity**.

Another limitation is that Kohlberg's theory may be **biologically deterministic**. Kohlberg placed emphasis on **maturational changes** in children's cognitive development as triggering progression through the stages, but this gives less consideration to social influences. Factors such as **parenting, parental gender roles, media representations and social expectations** may also influence gender development. This suggests that gender development cannot be explained entirely through biological or maturational changes. Therefore, Kohlberg's theory may provide an **incomplete explanation of gender development**.



Part 5b — Cognitive Explanations of Gender Development: Martin & Halverson's gender schema theory

Martin and Halverson (1983) agreed with **Kohlberg (1966)** that children's understanding of gender becomes **more sophisticated with age**. However, they argued that gender development is an **active process**, with children actively seeking and processing information about gender rather than simply waiting for cognitive maturation.

Gender schemas are mental frameworks containing **pre-existing ideas and beliefs about gender**. They help children organise and interpret information about what is considered appropriate for males and females.

- From around **2 years**, children develop a basic **gender identity**.
- They then **actively seek out information** that is consistent with their gender.
- Through **experience and observation**, their gender schemas become increasingly **complex and detailed**.
- These schemas influence how children **interpret information and guide their own behaviour**.

Initially, schemas may contain **simple gender stereotypes**, such as the idea that girls wear pink or play with dolls. As children gain more experience, these schemas become more developed.

As children develop gender schemas, they begin to **categorise people according to gender**. This creates an **in-group** and an **out-group**. This categorisation helps children decide **which gender-related information is relevant to them** and therefore influences what they pay attention to, remember and imitate.

In-group	Their own gender , which children tend to favour and identify with
Out-group	Other genders , which children initially show less preference for

Between approximately **3–7 years**, children tend to favour their own in-group, which can support **self-esteem and a sense of belonging**. By around **8 years**, children are more likely to develop a **more balanced view of the out-group**.

This differs from **Kohlberg (1966)**, who argued that children begin actively seeking **gender-consistent information after reaching gender constancy at around 6 years**. **Martin and Halverson (1983)** therefore suggest that **gender-typed preferences and behaviours can develop earlier**, because children begin actively processing gender information from around 2 years.

Overall, children are active processors of gender information, developing and using gender schemas through **experience and observation** rather than simply waiting for cognitive maturation.



AO3 - EVALUATION

A strength of gender schema theory is that there is **evidence that gender schemas influence memory and perception**. **Martin and Halverson (1983)** found that children were more likely to remember **gender-consistent photographs** than gender-inconsistent photographs. They also found that children sometimes **changed their memories of gender-inconsistent information** so that it matched their existing gender schemas. This suggests that gender schemas influence how children **process, interpret and remember gender-related information**, providing support for the theory.

A further strength is that research supports the idea that **gender schemas develop before gender stability and constancy**. **Martin and Little (1990)** found that children under four could show **strong gender stereotypes and sex-typed preferences** despite not having developed full gender stability or constancy. This supports gender schema theory because it suggests that children can begin organising information according to gender after developing a basic **gender identity**, rather than needing to reach Kohlberg's later stages first. Therefore, the findings provide support for the **early development of gender schemas** and challenge the idea that gender-typed behaviour only develops after gender constancy.

A limitation of gender schema theory is that gender schemas may be **difficult to change once they have developed**. The theory suggests that, hypothetically, providing children with **gender-inconsistent information** should be able to change their schemas and therefore their behaviour. However, **Kane and Sanchez (1994)** found that people may hold beliefs supporting gender equality without these beliefs necessarily translating into **changes in behaviour**, such as an equal division of household labour. This challenges the assumption that changing gender-related beliefs will automatically change behaviour. Therefore, gender schemas may have a **rigid influence on behaviour**, making them difficult to change.

Another limitation is that gender schema theory may **overemphasise cognitive factors and give insufficient attention to social influences on gender development**. The theory explains gender development mainly in terms of children actively organising information into schemas, but it does not fully explain where the content of these schemas comes from. Factors such as **parental influence, reinforcement, role models and cultural expectations** can influence the gender stereotypes children develop. Therefore, gender schema theory may provide an **incomplete explanation of gender development** because cognitive processes interact with social and cultural influences.



Part 6a — Social explanations of Gender Development: Social Learning Theory

Social Learning Theory (SLT) suggests that gender-role behaviour is learned through **observation, imitation and reinforcement**.

1. Direct learning

Differential reinforcement occurs when children are rewarded or punished for displaying gender-appropriate behaviour.

- **Reward** increases the likelihood that the behaviour will be repeated.
- **Punishment** decreases the likelihood of the behaviour being repeated.
- Parents, teachers and peers can act as **agents of socialisation**.
- For example, a girl may be praised for being **calm and affectionate**, reinforcing stereotypically feminine behaviour.

2. Vicarious learning

Children can also learn gender-role behaviour through **vicarious reinforcement**.

They observe the **consequences of a role model's behaviour** and are more likely to imitate behaviour that appears to be **rewarded or positively reinforced**. They may be less likely to imitate behaviour that is **punished or negatively received**.

For example, a boy may observe another boy being **praised for playing football** and become more likely to imitate this behaviour because he expects a similar positive response.

Vicarious learning involves four **mediational processes**:

Process	Meaning
Attention	The child must notice the behaviour.
Retention	The child must remember the behaviour.
Motor reproduction	The child must be able to perform the behaviour.
Motivation	The child must want to reproduce the behaviour.



3. Role models

Children are more likely to imitate role models who are:

- **The same sex** as themselves
- **High status** or popular
- Seen as having **desirable characteristics**
- Likely to receive **rewards** for their behaviour

Role models can include **parents, teachers, peers and media figures**.

Overall, SLT suggests that gender-role behaviour is **learned from the social environment**, rather than simply developing through cognitive maturation.

AO3 - EVALUATION

A strength of social learning theory is that there is **research evidence supporting the influence of socialisation on gender development**. **Smith and Lloyd (1978)** found that adults treated babies differently depending on whether they believed they were boys or girls. When dressed as girls, the babies were more likely to be praised for being **pretty, calm and feminine**, whereas when dressed as boys, they were encouraged to be more **active and assertive**. This demonstrates that adults can provide **different reinforcement based on perceived gender**, supporting the idea that children learn gender-appropriate behaviours through socialisation.

A further strength of social learning theory is that it can **explain cultural differences in gender roles**. Gender-appropriate behaviours vary between cultures, suggesting that they are partly learned from the social environment rather than being completely biologically determined. Social learning theory can explain this because children observe and imitate the **role models and behaviours that are rewarded within their particular culture**. Therefore, SLT provides a useful explanation of why gender roles can **vary between cultures and change over time**.

A limitation of social learning theory is that it may **underestimate the influence of biological factors on gender development**. Research into biological explanations suggests that **chromosomes and hormones** can influence gender-related behaviour, which cannot be fully explained through observation and reinforcement. For example, research with **non-human animals** has found sex-typed preferences even without the same socialisation experienced by humans. This suggests that gender development may involve an interaction between **biological and social influences**, rather than being explained by nurture alone. Therefore, SLT may provide an **incomplete explanation of gender development** because it places too much emphasis on environmental influences.

Another limitation is that some of the evidence supporting social learning theory comes from **artificial laboratory research**. For example, **Bandura's (1961)** research involved children observing an adult behaving aggressively towards a Bobo doll, which is unlikely to reflect how children normally learn gender-related behaviour in everyday life. Children may also have been influenced by **demand characteristics**, behaving in the way they thought the researchers expected. Therefore, some research supporting SLT may have **low ecological validity**, making it difficult to generalise the findings to real-life gender development.



Part 6b — Social explanations of Gender Development: Culture and Media

1. Cultural influence

Culture can influence gender roles, suggesting that gendered behaviour is not entirely biologically determined.

Mead (1935) studied three tribes in **New Guinea** and found differences in their gender roles and temperaments:

- **Arapesh**: both males and females were described as cooperative and gentle.
- **Mundugumor**: both males and females were described as aggressive and competitive.
- **Tchambuli**: males were described as more passive, while females were more dominant.

This suggests that **gender roles vary between cultures**, supporting the influence of **social and cultural factors**.

However, there are also **similarities between cultures**. **Munroe and Munroe (1975)** found that traditional divisions of labour were common across many cultures, with women more often responsible for domestic tasks and men more often involved in manual labour.

This suggests that **both cultural similarities and differences** need to be considered when explaining gender roles.

2. Media

The **media can act as an agent of socialisation** by providing children with models of gender-appropriate behaviour. Through **Social Learning Theory**, children may observe gendered characters in television, films or social media and **imitate their behaviour**, particularly when the behaviour appears to be rewarded.

Bussey and Bandura (1999) argued that media representations can contribute to gender-role stereotypes. For example, males are often portrayed as **independent and dominant**, while females may be portrayed as **dependent or seeking advice**. Repeated exposure to these models may influence children's **gender schemas and expectations** about how males and females should behave.

Therefore, both **culture and media can influence gender roles** by providing children with **gendered expectations and role models**.



AO3 - EVALUATION

A strength of research into culture and gender roles is that there is **evidence that cultural experiences influence gender development**. **Mead (1928)** studied adolescents in Samoa and found that gender roles and behaviour differed from those typically expected in Western cultures. For example, **Samoan girls were described as relatively assertive and sexually open, while boys were expected to be more gentle and cooperative**. This suggests that gender behaviour can vary depending on the **cultural environment**, challenging the idea that gender roles are determined solely by biology. Therefore, cross-cultural research provides evidence for the **interaction between nature and nurture** in gender development.

A further strength is that there is **evidence that the media can reinforce gender stereotypes**. **Bussey and Bandura (1999)** argued that media provides children with **gendered models** that can be observed and imitated. For example, males are often represented as **independent and dominant**, whereas females may be portrayed as more dependent or seeking advice. Through **vicarious reinforcement**, children can learn which behaviours are considered appropriate for their gender. Therefore, the media can act as an important **socialising influence on gender roles**.

A limitation of cross-cultural research such as Mead's is that it may be affected by **researcher bias**. **Mead** had a clear interest in investigating whether behaviour was shaped by culture, and later critics argued that she may have **underestimated evidence that contradicted her conclusions**. Her findings have also been challenged by other anthropologists, meaning that her observations may not provide a completely objective representation of Samoan behaviour. Therefore, **observer bias and interpretation of behaviour** may reduce the validity of conclusions about the influence of culture.

Another limitation is that the media does not always **reinforce traditional gender stereotypes**. Some media portray characters who challenge conventional gender roles, providing children with alternative models of behaviour. This suggests that the influence of media depends on **the type of role models and messages presented**, rather than media exposure automatically producing traditional gender roles. Therefore, the media may both **reinforce and challenge gender stereotypes**, making its influence on gender development more complex than social learning theory suggests.



Part 7 — Gender Incongruence

Gender incongruence occurs when a person's **gender identity differs from the sex they were assigned at birth**. Some people experiencing gender incongruence may experience **significant distress or difficulty functioning**.

Psychologists have proposed **two broad** explanations for how gender incongruence may develop.

1. Biological explanations

Biological explanations suggest that **differences in brain development and genetics may influence gender identity**. If biological factors involved in brain development do not correspond with the person's biological sex, their **gender identity may develop in a way that differs from their biological sex**, resulting in gender incongruence.

Explanation	Research and findings	What this suggests
Brain structure	Zhou et al. (1995) investigated the bed nucleus of the stria terminalis (BSTc), a brain region involved in aspects of sexual behaviour and reproductive functioning. The BSTc was typically larger in males than females. In transgender women, it was found to be closer in size to that typically found in females. Kruijver et al. (2000) supported this finding by examining the number of neurons in the BSTc and finding a similar pattern.	This suggests that brain structure may be associated with gender identity, because the BSTc of transgender women was more similar to that typically found in females than males. This provides evidence for a biological contribution to gender identity. However, the research shows an association rather than a cause-and-effect relationship.
Genetic factors	Coolidge et al. (2002) investigated genetic factors associated with gender-incongruent traits. They studied 157 pairs of twins within a larger sample of 314 children and adolescents. Clinically significant gender-incongruent traits occurred in 2.3% of the sample. The researchers estimated that 62% of the variance could be explained by additive genetic factors, while the remaining	This suggests that genetic factors may make an important contribution to gender development, while environmental experiences also play a role. The findings therefore support an interaction between nature and nurture, rather than suggesting that gender is completely genetically determined.



38% was attributed to **non-shared environmental factors**.

2. Social and Cultural explanations

Social and cultural explanations suggest that **early relationships, social experiences and cultural influences** may contribute to a person's gender identity developing differently from their biological sex, resulting in **gender incongruence**.

Explanation	Research and findings	What this suggests
Psychoanalytic explanation	Ovesey and Person (1973) proposed that, in some males, anxiety about separation from the mother during early childhood may lead the child to identify with the mother. This identification may help the child reduce separation anxiety .	This suggests that early childhood relationships and attachment experiences may influence gender identity . If a child strongly identifies with their mother, this could contribute to a gender identity that differs from their biological sex , potentially helping to explain gender incongruence.
Cognitive explanation	Liben and Bigler (2002) proposed a dual-pathway model of gender development, suggesting that gender development is influenced by two pathways : Attitudinal pathway: Children learn cultural ideas and gender stereotypes about appropriate male and female behaviour. Personal pathway: Children's own interests and experiences influence their gender-related attitudes and behaviour.	This suggests that cultural expectations and individual experiences may influence gender identity . These influences could contribute to a gender identity that differs from a person's biological sex , potentially helping to explain gender incongruence.



AO3 - EVALUATION

A strength of biological explanations is that they are **supported by research**. **D'Andrea et al. (2020)** conducted a systematic review and meta-analysis of five studies involving **795 transgender women and 1,355 control men**. They found that transgender women had **longer CAG repeat sequences in the androgen receptor gene**. The number of CAG repeats can affect the **activity of androgen receptors**, which determine how strongly cells respond to testosterone. Longer repeats are generally associated with **reduced androgen receptor activity**, meaning that transgender women may respond differently to testosterone. This provides evidence that **genetic differences affecting androgen sensitivity may contribute to gender incongruence**. However, the finding is an **association rather than evidence of causation**, so it cannot demonstrate that CAG repeat length causes gender incongruence.

A further strength of social and cultural explanations is that **research shows that social experiences can influence the experiences of people with gender incongruence**. **Arvind et al. (2021)** studied **20 transgender women and Hijra in India** and found a significant positive relationship between **social strain and psychological distress**. This suggests that **social and cultural experiences can have an important impact on the experiences of gender-incongruent individuals**, supporting the importance of considering environmental factors alongside biological explanations.

Another strength is that biological explanations have **practical applications**. Identifying biological factors associated with gender incongruence may improve understanding and support. Research into biological influences can help challenge the assumption that gender incongruence is simply a matter of **choice or social influence**, and may contribute to more informed approaches to psychological and medical support. Therefore, biological research can have **real-world value** by improving understanding of the experiences of people with gender incongruence.

A limitation of biological explanations is that they **cannot establish cause and effect**. Much of the biological evidence is **correlational**, meaning that researchers can identify biological differences associated with gender incongruence but cannot show that these differences caused it. For example, brain research such as **Zhou et al. (1995)** used post-mortem comparisons, so differences in brain structure could potentially be influenced by **hormone treatment, behaviour or experiences after transition**, rather than being the original cause of gender incongruence. Therefore, biological explanations may identify an association without demonstrating a **causal biological mechanism**.

Another limitation is that some biological explanations may be **gender-biased and lack universality**. **Ovesey and Person (1973)** proposed a psychoanalytic explanation in which gender incongruence in males develops partly because of difficulties surrounding identification with the mother and separation. However, this explanation provides a less convincing account of **gender incongruence in females**, as it is based on assumptions about differences in early parent-child relationships between boys and girls. **Rekers (1986)** similarly proposed that gender incongruence in males may be linked to the absence of a father during the critical period for attachment. Therefore, these explanations may be limited because they rely on **subjective assumptions about unconscious processes** and do not provide a comprehensive explanation of gender incongruence across different individuals.



A limitation of social explanations is that there is **limited objective evidence that social influences cause gender incongruence**. For example, **Littman (2019)** reported parental accounts suggesting that peer and social influences may contribute to gender incongruence. However, the research relied on **parents' reports rather than the young people's own experiences**, and methodological criticisms highlighted problems with retrospective reports, sampling and the validity of the measures used. Therefore, the findings provide limited evidence that **social influences cause gender incongruence**, weakening a purely social explanation.

