

Remember: Daryl Bem's Exotic Becomes Erotic Theory.

Developmental environment? Freudian theory would suggest that domineering mother and distant father causes gay men. However, children of same sex couples don't learn to be gay and excessive same-sex experience (boarding schools) does not lead to increased adult levels of homosexuality (Wellings et al. 1994)

Maternal Immunity? Blanchard (2004) found that odds of becoming homosexual increases by 33% for every older brother. Linked to maternal immune system building up Y-linked antigens. Doesn't explain lesbians.

Genetics? Twin studies have shown a mild genetic component. Hohmann showed moderate heritability of homosexuality.

Prenatal Androgens? Low levels-male attraction. High levels-female attraction. Several studies have suggested that index:ring ratio (which is partly determined by androgen levels and higher in women) is a good predictor for homosexual women, but not so much for men.

What determines gender identity? Genitalia, Prenatal hormone levels, Sex differentiation in brain regions?

Genitalia? Pseudo-Hermaphrodites (first woman then man) look female but at puberty develop male-like genitalia and usually a **male gender identity**. But is this due to genitalia, social pressures or hormones?

Prenatal Hormones? Unlikely. 90% of women with CAH develop a female gender identity.

Brain Regions? Bed nucleus of the stria terminalis (BST) is related to gender identity and not orientation.

Sexual Orientation
What is it determined by?

Biological sex is a dichotomous variable: there are only 2 possible sexes.

This differs from sexual orientation, gender identity (feeling like a man or woman), and gender role (gender typical behaviour), which are **continuous variables**.

Sex and Gender

Gender Identity

Problems in Development

Hormones & Development

Androgen Insensitivity Syndrome: A defective receptor makes organs insensitive to androgens, so Wolffian duct and Mullerian duct regress, leading to no internal genitalia and external female genitalia.

Congenital Adrenal Hyperplasia: Excess production of androgens, prenatally. Increases likelihood of being male.

Males: Androgens (including testosterone).

Females: Oestrogen & Progesterone.

These are responsible for sex differentiation, including in the brain. Also responsible for the emergence of secondary sexual characteristics in puberty (e.g. pubic hair, voice deepening).

The undifferentiated gonad develops into an ovary. The Mullerian duct develops into female internal genitalia. The Wolffian duct regresses. External genitalia are **female by default**.

The Y chromosome has a gene coding TDF (testicular determining factor). This induces the undifferentiated gonad to develop into testis. The testis produces MIH (mullerian inhibiting hormone), which stops the Mullerian tube developing. The testis also produces androgens, which induces the wolffian duct to develop into internal male genitalia and external.