

Problems with Psychometrics: Culture & Gender

This may lead to group performances (between sexes for examples).

**Motivation: Dweck (1978)** argued that girl-like feedback (addressing problem to abilities, rather than effort) reduced motivation and increased learned helplessness.  
**Expectation: Rosenthal & Jacobson (1966)** found that children randomly labeled as 'bloomers' were significantly more likely to improve in IQ test performance, with 21 climbing 30 IQ point or more over 6 months compared to 5 in the control group.

**Practice:** "Practice makes perfect".

**Anxiety:** High levels are associated with poor performance.

**Acquiescence (Cronbach, 1946):** People are more likely to agree with a sentence. This could be dealt with by norming. Questions measuring the same construct but in different directions can also be used (e.g. "I often feel relaxed", "I often suffer from nerves")

**Social Desirability (Edwards, 1957):** The tendency to show oneself in a good light. To eliminate this, it is possible to use correlations with the **Crowne-Marlowe Social Desirability Scale (1964)** this measures a person's desire for 'social approval'. People who score highly have a fabricated self-concept which they feel they need to maintain and defend.

Factors Influencing Test Performance

Response Styles

**Item Response Theory (Reise et al. 2000)** can be used to assess internal biases. This can be done by plotting group success on one item and comparing it to success on the whole test (then check if they are similar).

**Internal Biases** This is where some tests are biased against certain group.

Sex Differences

Most researchers have not reported sex differences (Spearman, 1927; Cattell).

**Richard Lynn et al. (2004)** argued that these studies were based on a relatively small sample (<500). They found that adult men were 5 points higher than women on average, UG male students were 3-5, 15-19 were 2 points higher and there was no difference between <15 years old.

**Howell et al. (1995)** found that adolescent males had better spatial ability (mental reasoning and spatial ability) and women had better verbal ability (reading comprehension and perceptual speed). **Lynn et al. (1980s)** supports this claim.

**Furnham (2001) Male Hubris, Female Humility** men see intelligence as higher than women's, with specific abilities along gender lines. These may be passed on to children.

**Jackson & Rushton (2006) SAT Tests** argue that the sex difference of about 0.12 (or 3.63 IQ) points favouring males on the SAT is not tangible but real.

**Jones et al. (2003)** argued that this was the result of evolutionary consequences. Men took lead in foraging and has more polygamous relationships.

**Haier et al. (2005) Brain Regions** found that men had highest correlations in IQ tests and frontal and parietal lobes, whereas women had highest correlations in frontal lobes and Broca's area.

**Environmental: Levine et al. (2005)** perhaps stereotypically males play with items (video games, building blocks) that enhance spatial ability.

**Construct Validity**  
How well a test measures what it intends to measure. Intelligence tests can vary in this.

**Culture: Deregowski (1972)** suggested that tests measuring non-verbal abilities and intelligence are ethnocentric in that they endorse a specific way of viewing 3D drawings. Intelligence is different in different cultures. 3D is perceived differently etc.

**Age: Kane et al. (1985)** found that older children tend to perceive intelligence more in terms of cognitive, internal abilities than younger children.

**Misuse: Gould ("Mismeasurement of Man")** criticised Yerkes' work in the Army administering IQ tests. He criticised ethnocentricity of research ("Washington is to Adams what first is to \_\_\_\_") and racist researchers.

External Biases

**Egalitarian Fallacy (Kline, 1993)** Group differences in performance do not necessarily mean that the test is unfair. Our desire to be egalitarian may cause us to write perfectly valid tests off. This is perhaps the case with race and IQ; there are maybe differences (and there is certainly data to support this idea) (Mackintosh, 2005).

However, intelligence is a construct that is culturally defined and IQ tests are just one indicator of 'intelligence'. Race is also nonsense from a biological point of view, it is more reasonable to consider differences in terms of 'culture'. However, culture is difficult to measure by controlling for culture (Cattell tried with limited success).

**Race Differences (Rushton et al. 2005)** argue that mean black-white IQ difference in the US is about 80% heritable.

**James Watson's 'Inconvenient' Truth** Rushton et al. (2008) argues that Watson was right in asserting that people of sub-saharan african descent score lower on average scores of general intelligence than those of european or east asian descent. They argue that the IQ differences are worldwide (in the order of East Asian, European then African) and often found in g-loaded tests. There are notable brain size differences (though it is debatable if there are differences between east asians and europeans).