

Ch. 11 Test review

Next Tuesday

28 m.c.

One essay

Notes

- This PowerPoint will assist you in studying for the test but it does not contain answers to all the questions on the study guide. You will need to consult that guide.
- Doing practice questions in the paperback Study Guide, at the on line website, and on the CD will assist in studying for the test.

Robert Sternberg

- Triarchic theory of intelligence
- Analytical
- Creative
- Practical



Robert Sternberg, 435

Sternberg (1985, 1999, 2003) also agrees with Gardner, but suggests three intelligences rather than eight.

1. **Analytical Intelligence:** Intelligence that is assessed by intelligence tests.
2. **Creative Intelligence:** Intelligence that makes us adapt to novel situations, generating novel ideas.
3. **Practical Intelligence:** Intelligence that is required for everyday tasks (e.g. street smarts).

Creativity components, 438-9

Creativity is the ability to produce ideas that are both novel and valuable. It correlates somewhat with intelligence.

1. **Expertise:** A well-developed knowledge base.
2. **Imaginative Thinking:** The ability to see things in novel ways.
3. **Adventuresome Personality:** A personality that seeks new experiences rather than following the pack.
4. **Intrinsic Motivation:** A motivation to be creative from within.
5. **A Creative Environment:** A creative and supportive environment allows creativity to bloom.

Alfred Binet, 443

- Binet, who published the first intelligence test in 1905, was aiming to identify students who could benefit from extra help in school
- his assumption was that lower IQ indicated the need for more teaching, not an inability to learn.



More on Binet

- Founded modern intelligence testing
- His goal: identify those with mental deficiencies
- He created the concept of your *mental age*.
- This led to labeling people.

Alfred Binet, 443

Alfred Binet and his colleague Théodore Simon practiced a more modern form of intelligence testing by developing questions that would predict children's future progress in the Paris school system.

Binet assessed mental age by studying students' reasoning skills.

His tests were originally designed to measure academic aptitude.

Stanford-Binet Test, 443

- the widely used American revision of Binet's original intelligence test
 - revised by Lewis Terman at Stanford University

Lewis Terman

- Created Stanford-Binet IQ test
- (William Stern dev. the formula)
- Believed intelligence was inherited



Lewis Terman, 443

In the US, Lewis Terman adapted Binet's test for American school children and named the test the Stanford-Binet Test. The following is the formula of **Intelligence Quotient (IQ)**, introduced by William Stern:

$$\text{IQ} = \frac{\text{mental age}}{\text{chronological age}} \times 100$$



Origins of Intelligence, 444

- Intelligence Quotient (IQ)
 - defined originally the ratio of mental age (ma) to chronological age (ca) multiplied by 100
 - $IQ = ma/ca \times 100$)
 - on contemporary tests it is the average performance for a given age is assigned a score of 100

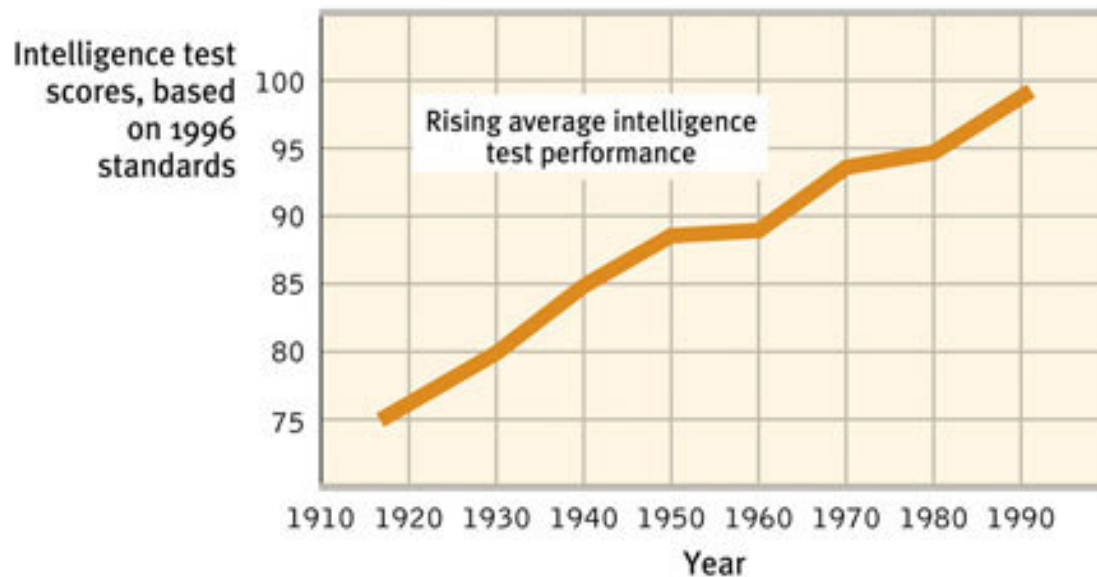
Stereotype Threat, 465

A **stereotype threat** is a self-confirming concern that one will be evaluated based on a negative stereotype.

This phenomenon appears in some instances in intelligence testing among African-Americans and among women of all colors.

Flynn Effect, 447

In the past 60 years, intelligence scores have risen steadily by an average of 27 points. This phenomenon is known as the Flynn effect.



The Flynn Effect, 447

- James Flynn

“The **Flynn effect** is the continued year-on-year rise of IQ test scores, an effect seen in all parts of the world...The average rate of rise seems to be around three IQ points per decade.”

Possible causes:

Earlier maturation

Better nutrition

Increased cranial
size

What is Intelligence? 431

Intelligence (in all cultures) is the ability to learn from experience, solve problems, and use our knowledge to adapt to new situations.

In research studies, *intelligence* is whatever the intelligence test measures. This tends to be “school smarts.”

Principles of Test Construction, 446

For a psychological test to be acceptable it must fulfill the following three criteria:

1. Standardization
2. Reliability
3. Validity

Controversies About Intelligence

Despite general agreement among psychologists about the nature of intelligence, two controversies remain:

1. Is intelligence a single overall ability or is it several specific abilities?

The concept of the g factor implies that intelligence is a single overall ability

Emotional Intelligence, 436

Emotional intelligence is the ability to perceive, understand, and use emotions (Salovey and colleagues, 2005). The test of emotional intelligence measures overall emotional intelligence and its four components.

Current intelligence tests, 444

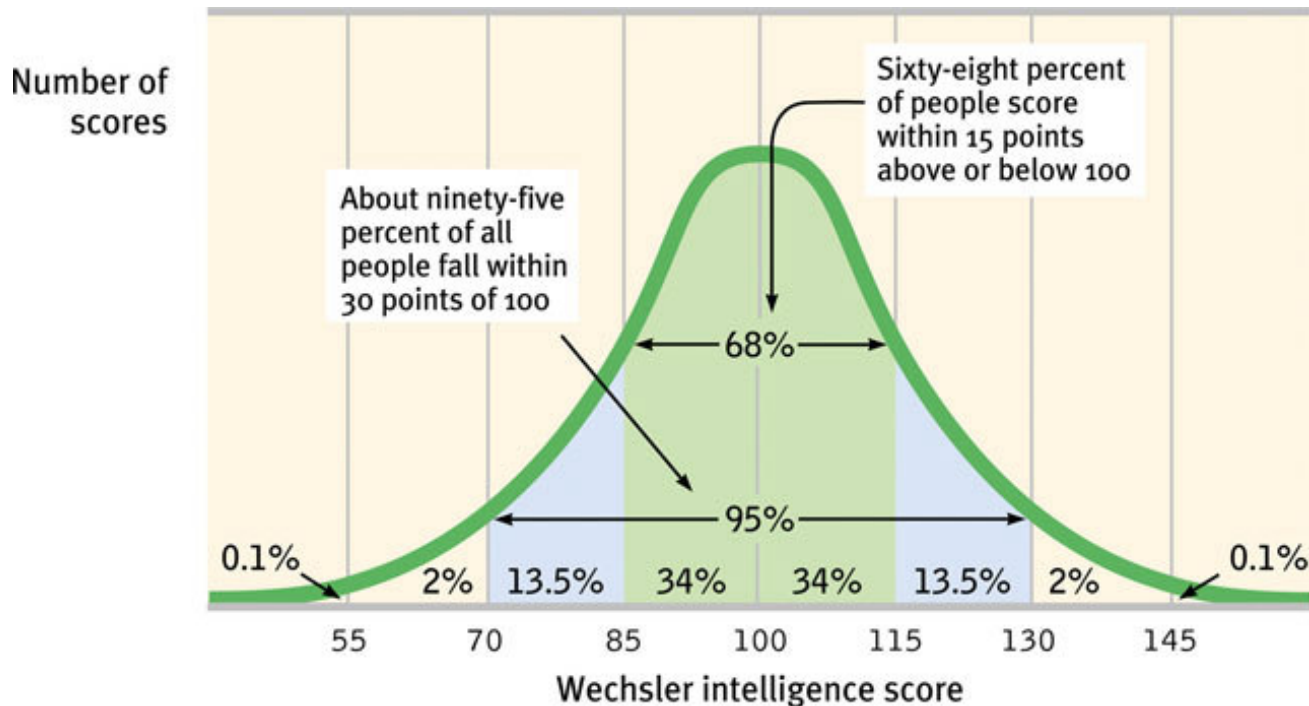
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Standardization, 446

Standardizing a test involves administering the test to a representative sample of future test takers in order to establish a basis for meaningful comparison.

Normal Curve, 447

Standardized tests establish a normal distribution of scores on a tested population in a bell-shaped pattern called the **normal curve**.



Test Validity, 448

Validity of a test refers to what the test is supposed to measure or predict.

1. **Content Validity:** Refers to the extent a test measures a particular behavior or trait.
2. **Predictive Validity:** Refers to the function of a test in predicting a particular behavior or trait.

Mental Retardation, 452

- **Mental Retardation**

- a condition of limited mental ability
- indicated by intelligence scores below 70
- produces difficulty in adapting to the demands of life
- varies from mild to profound

- **Down Syndrome**

- retardation and associated physical disorders caused by an extra chromosome in genetic make-up

Mental Retardation, 452

Mentally retarded individuals required constant supervision a few decades ago, but with a supportive family environment and special education they can now care for themselves.

DEGREES OF MENTAL RETARDATION

Level	Approximate Intelligence Scores	Percentage of Persons with Retardation	Adaptation to Demands of Life
Mild	50-70	85%	May learn academic skills up to sixth-grade level. Adults may, with assistance, achieve self-supporting social and vocational skills.
Moderate	35-50	10%	May progress to second-grade level academically. Adults may contribute to their own support by laboring in sheltered workshops.
Severe	20-35	3-4%	May learn to talk and to perform simple work tasks under close supervision but are generally unable to profit from vocational training.
Profound	Below 20	1-2%	Require constant aid and supervision.

Source: Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, text revision. Copyright 2000 American Psychiatric Association.



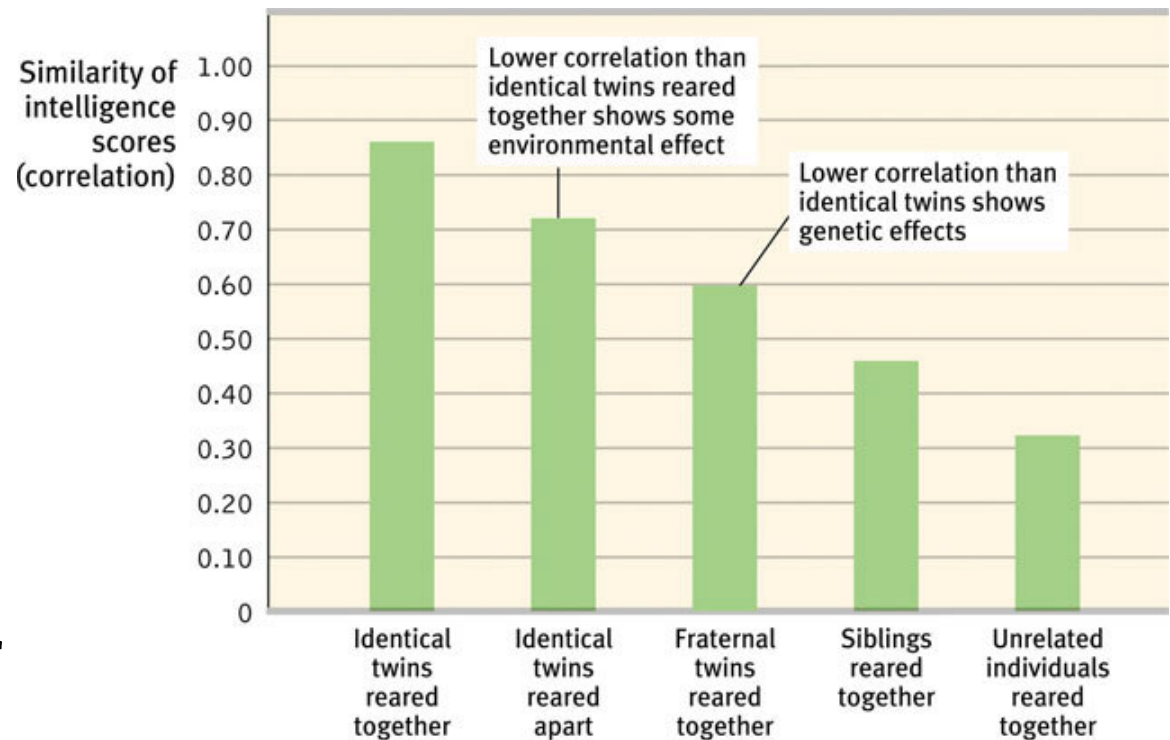
Gifted Programs, 453

- Some argue: identify the “gifted” better environments
- Others ask: is giftedness a single trait?
- Tracking students is “divisive” because it denies both groups richer opportunities
- They create a self-fulfilling prophecy
- They increase isolation between groups
- They promote racial segregation

Most powerful evidence for genetic component for intelligence

Studies of twins, family members, and adopted children together support the idea that there is a significant genetic contribution to intelligence.

Note: Identical twins reared apart is higher than fraternal reared together.



Racial Gaps in Test Scores

- Whites v. African Americans
- Environmental differences are largely responsible for the difference in their test scores

Heritability of intelligence , 456

- the proportion or percentage of variation among individuals that we can attribute to genes
- variability depends on range of populations and environments studied

Essay

- The question will take you to various parts of the textbook and ask you to write about:
- Fluid intelligence
- Conditioned and unconditioned stimulus
- The firing of a neuron
- Spontaneous recovery in classical conditioning
- Group polarization
- You will use your book in writing this answer.