

Chapter 9: Intelligence + Language

* Intelligence → the ability to think, learn from experience, solve problems, and adapt to new situations.

* Language → a system of communication that uses symbols in a regular way to create meaning.

(1.1) * the general intelligence factor (g) → the construct that the different abilities and skills measured on intelligence tests have in common.
* Proposed by psychologist Charles Spearman

* Psychologists Alfred Binet + Henri Simon developed the first intelligence test in the early 1900s → named the Stanford-Binet test.

* the specific intelligence test (s) → a measure of specific skills in narrow domains

↳ fluid intelligence → refers to the capacity to learn new ways of solving problems + performing activities; decreases with age

↳ crystallized intelligence → refers to the accumulated knowledge of the world we've acquired through our lives; increases w/age

* primary mental abilities → made up of seven clusters:

→ word fluency → verbal comprehension → spatial ability

→ perceptual speed / comprehension → numerical ability

→ inductive reasoning → memory

* Proposed by L. L. Thurstone (1938)

* Triarchic (3 part) theory of intelligence → proposes that peop may display more or less analytical intelligence, creative inte and practical intelligence; proposed by Robert Sternberg
↳ Sternberg argued that traditional intelligence tests only measured analytical intelligence.

* Research indicates that creative + analytical intelligence aren't correlat

* convergent thinking → thinking directed toward finding the r^e answer to a problem

* divergent thinking → the ability to generate many different ideas for or solutions to a single problem.

5 Components Important to Creativity

- ① Expertise (in the topic they're working in)
- ② Imaginative thinking
- ③ Risk taking
- ④ Intrinsic interest
- ⑤ Working in a creative environment

* Howard Gardner (1983) also argued in favor of multiple intelligences → thought it would be evolutionarily functional

* autistic savants → people who score low on intelligence tests overall, but may have exceptional skills in a given dom

Howard Gardner's 8 Specific Intelligences

- | | |
|------------------------|----------------------|
| → Linguistic | → Kinesthetic (body) |
| → Spatial | → Interpersonal |
| → Musical | → Intrapersonal |
| → Logical-mathematical | → Naturalistic |

①.2) * The goal of most intelligence tests is to measure "g," the general intelligence factor. Good intelligence tests:
→ must be reliable
→ demonstrate construct validity

* standardization → administering a test to a large number of people of different ages and finding the average score for each age level.

* the Flynn effect → refers to the observation that intelligence test scores have increased substantially worldwide over past 10 yrs.
↳ tests must periodically be restandardized

* Theories as to the cause of the Flynn effect of a 3 IQ point increase over 10 years on average:
→ better nutrition
→ increased access to information
→ more familiarity with standardized tests

* mental age → the age at which a person is performing intellectually

* intelligence quotient (IQ) → a measure of intelligence adjusted for age
*
$$IQ = \frac{\text{mental age}}{\text{chronological age}} \times 100$$

* the Wechsler Adult Intelligence Test → most widely used for adults
→ scores on 4 domains: verbal, perceptual, working memory, and processing speed
→ consists of 15 tasks designed to assess intelligence
→ high reliability and construct validity