Wechsler Adult Intelligence Scale (WAIS)

- WAIS-4: Adult Intelligence Scale (2008)
  - Evolved from Wechsler-Bellevue Intelligence Scale (1937)
  - Designed for Adults
  - Point scale rather than Age scale
  - Added Performance items (to fill void left by SB's reliance on language/verbal skills)
  - Focused on multiple abilities rather than “g”
- WISC-4: Intelligence Scales for Children
- WPPSI-3: Preschool and Primary Scale

David Wechsler
- “[...]Spearman’s theory of general intelligence (g) was too narrow. [It is] an effect rather than a cause[...] Non-intellective factors, such as personality, contribute to the development of each person’s intelligence.”
- “Intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his environment”
- Developer of major IQ assessment tests
- Deviation IQ (DQ) score replaced IQ=MA/CA

Cognitive / Info Processing 1
- What is required to correctly answer a single item on an IQ test?
  - Verbal comprehension: understand the instructions you hear or read
  - Short term memory: remember the instructions
  - Long term memory: retrieve answer or procedure
  - Working memory: juggle information, do calculations, etc.
  - Judgement / Reasoning: decide between competing answers
  - Attention / Concentration: remain focused on task

Cognitive / Info Processing 2
- Verbal skills: give reply with voice
- Motor skills: respond with hand
- View response of examiner: praise? criticism?
- Meta cognition: judge performance, adjust strategy accordingly
- Cognitive science believes many of these to be independent processes subsumed by independent brain systems

WAIS-4 is different from WAIS-3
- Reorganized:
  - Dropped the “Verbal/Performance” IQ scores
  - Renamed them “GAI” and “CPI”
- New “General Ability Index” (GAI)
  - GAI is supposed to be more insensitive to brain disorders, providing a possible estimate of pre-morbid functioning
  - Reduced reliance on Working Memory and processing Speed
  - “Theoretically, the GAI represents and individual’s overall cognitive ability, if working memory and processing speed abilities were similar to verbal and non-verbal abilities”
- New “Cognitive Proficiency Index” (CPI)
  - measure of working memory & processing speed
WAIS-IV General Ability Index (GAI)

- Verbal Comprehension Index (VCI)
  - Vocabulary
  - Similarities
  - Information
  - "Comprehension"

- Perceptual-Reasoning (PRI)
  - Block Design
  - Matrix Reasoning
  - Visual Puzzles
  - "Picture Completion"
  - "Figure Weights"

WAIS-IV Vocabulary, Similarities, Information

- Vocabulary
  - "What is a guitar?"

- Similarities
  - "In what way are an apple and a pear alike?"

- Information
  - "How far is it from New York to Paris?"

- Comprehension
  - "Why is food often sold in sealed containers?"
    - 1 point: to keep it clean
    - 1 point: to keep it fresh
    - 1 points: to make it easy to transport

WAIS-IV: Block Design

WAIS: Matrix Reasoning
WAIS-IV: Visual Puzzles

Which 3 of these pieces go together to make this puzzle?

1  2  3

4  5  6

WAIS-IV Cognitive Proficiency Index (PCI)

• Working Memory Index (WMI)
  ▪ Digit Span
  ▪ Arithmetic
  ▪ *Letter-Number Sequencing

• Processing Speed Index (PSI)
  ▪ Symbol Search
  ▪ Coding
  ▪ *Cancellation

WAIS: Digit Span

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WAIS-IV Arithmetic & Letter-Number Sequencing

• Arithmetic
  ▪ “How many 45-cent stamps can you buy for a dollar?”

• Letter-Number Sequencing
  ▪ “Repeat Q-1-B-3-J-2 in numerical and alphabetical order”
    ▪ ex. “123, BJQ”

WAIS : Digit Symbol Coding

Digit Symbol—Coding

WAIS-4

• Which of these tests are completely “pure” measures of an ability?
  ▪ Verbal / language issues?
  ▪ Cultural bias?
  ▪ Motivation?
  ▪ Expectancy effects?
  ▪ Strategy : speed vs. accuracy?
Multiple Intelligences

- The WAIS-4 tests multiple dimensions of intelligence, but this is not the same thing as multiple intelligences.
- Which of Gardner’s 8 intelligences are actually measured by the WAIS-4?

Gardner’s 8 Intelligences

- logical-mathematical (*)
- verbal-linguistic (*)
- spatial (*)
- musical
- bodily-kinesthetic
- naturalist
- interpersonal
- intrapersonal