

Wechsler Adult Intelligence Scale (WAIS)

Wechsler Scales

- 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

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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

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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

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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

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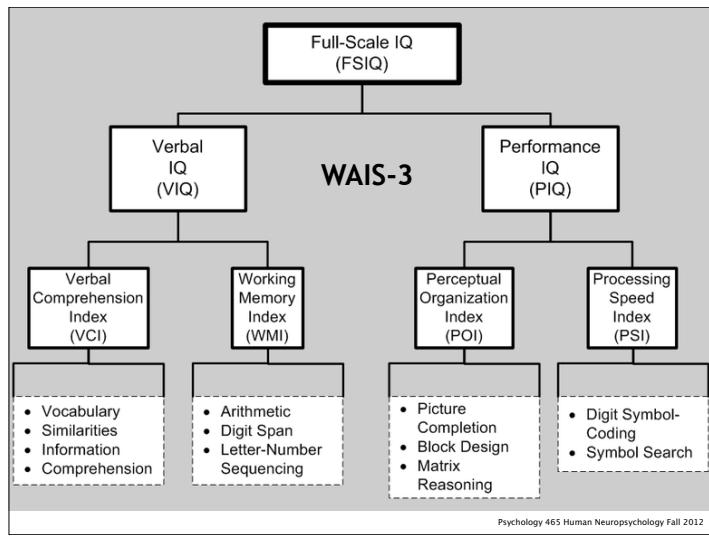
WAIS-4 is different from WAIS-3

- 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 an 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

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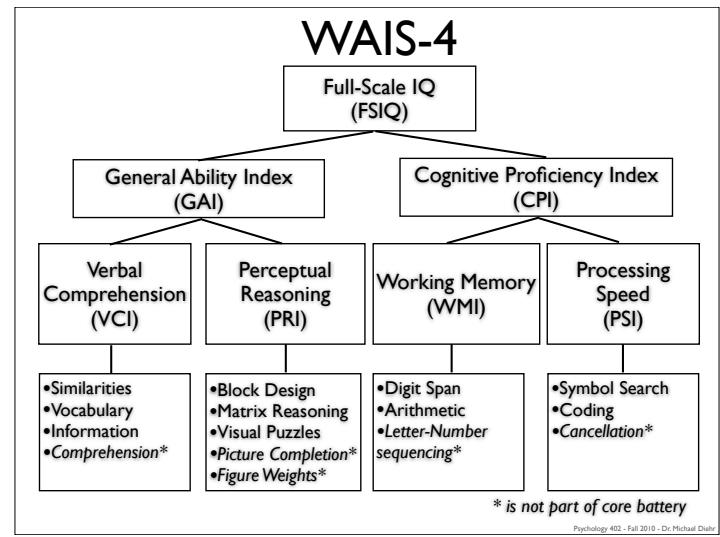
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WAIS-IV General Ability Index (GAI)

- Verbal Comprehension Index (VCI)
 - Vocabulary
 - Similarities
 - Information
 - *Comprehension
- Perceptual-Reasoning (PRI)
 - Block Design
 - Matrix Reasoning
 - Visual Puzzles
 - *Picture Completion
 - *Figure Weights

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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

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WAIS-IV: Block Design

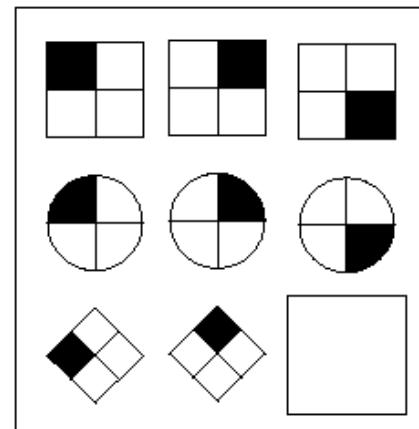


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WAIS: Matrix Reasoning

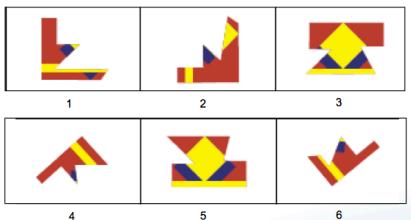


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WAIS-IV: Visual Puzzles

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



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WAIS-IV Cognitive Proficiency Index (PCI)

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

- Processing Speed Index (PSI)
 - Symbol Search
 - Coding
 - *Cancellation

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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”

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WAIS : Digit Symbol Coding

Digit Symbol—Coding



Sample Items

2	1	3	7	2	4	8	2	1	3	2	1	4	2	3	5	2	3	1	4
1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	1	4
5	6	3	1	4	1	5	4	2	7	6	3	5	7	2	8	5	4	6	3
1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	1	4
7	2	3	1	9	5	6	4	7	3	6	1	5	4	6	3	7	9	2	8
6	5	9	4	8	3	7	2	6	1	5	4	6	3	7	9	2	8	1	7
9	4	6	8	5	9	7	1	8	5	2	9	4	6	6	3	7	9	8	6
2	7	3	6	5	1	9	8	4	5	7	3	1	4	8	7	9	1	4	5

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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?

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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