

# Behavioral Assessment in the Military Selection Process

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# What is assessment and what does it do?

- ▶ Tests = Assessment instruments
  - ▶ procedures or methods
  - ▶ that examine or determine the presence of a factor or phenomenon
  - ▶ that comprise a set of standardized items (e.g. questions, stimuli, or tasks)
  - ▶ that are scored in a standardized manner and
  - ▶ are used to examine and possibly evaluate individual differences (e.g. in abilities, skills, competencies, dispositions, attitudes, emotions) (Anastasi & Urbina, 1997; American Psychological Association, 2006; Cronbach, 1990).
- ▶ This definition includes psychological and educational tests in all forms of deployment (e.g. paper-and-pencil booklets, computerized online testing, work samples, serious games).

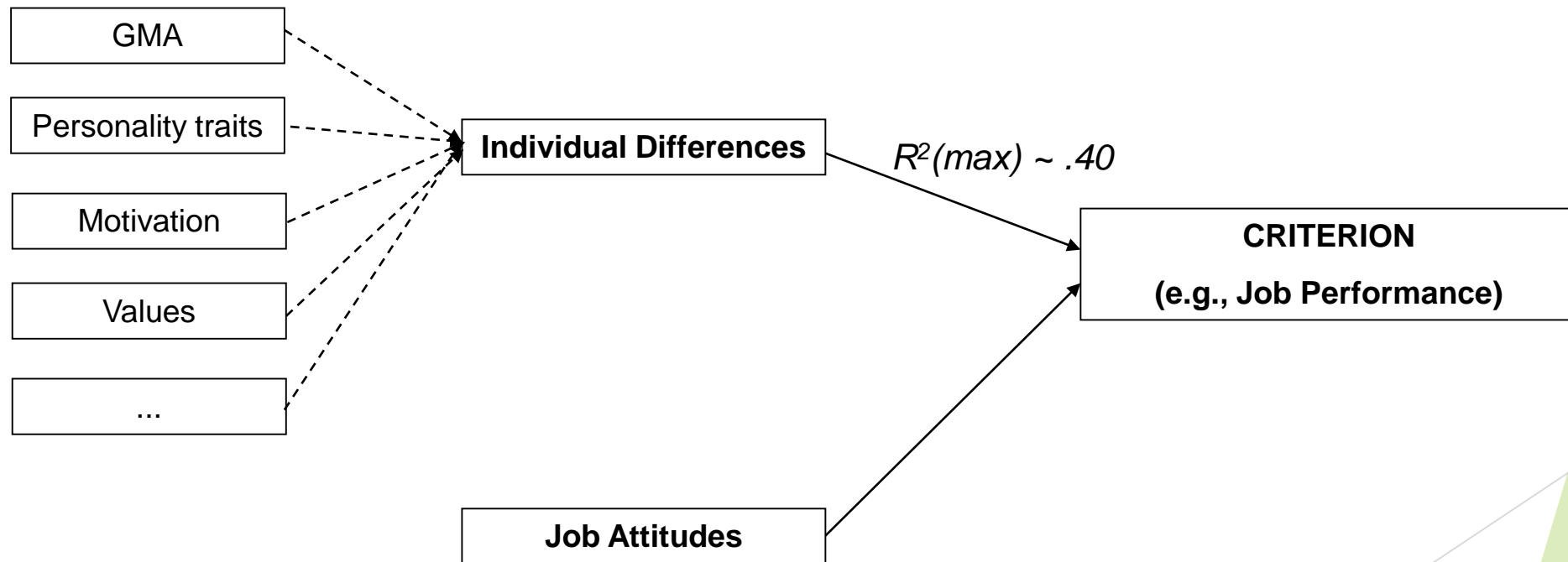
# Psychological measurement

- ▶ Assessment of psychological constructs by means of tests / assessment instruments
- ▶ Intangible constructs
  - ▶ assessed based on inferences
  - ▶ from primary data collected through
    - ▶ self-report / introspection
    - ▶ other-report / perception
    - ▶ observation / behavior
- ▶ Generally:
  - ▶ Observation
  - ▶ Interview
  - ▶ Personality inventory
  - ▶ Test

# Why bother? Predictive validity

- ▶ Psychological assessment provides to decision-maker data about a person, that is not accessible through other means
- ▶ Allows for description + explanation + prediction
- ▶ Especially at the selection stage, of huge importance

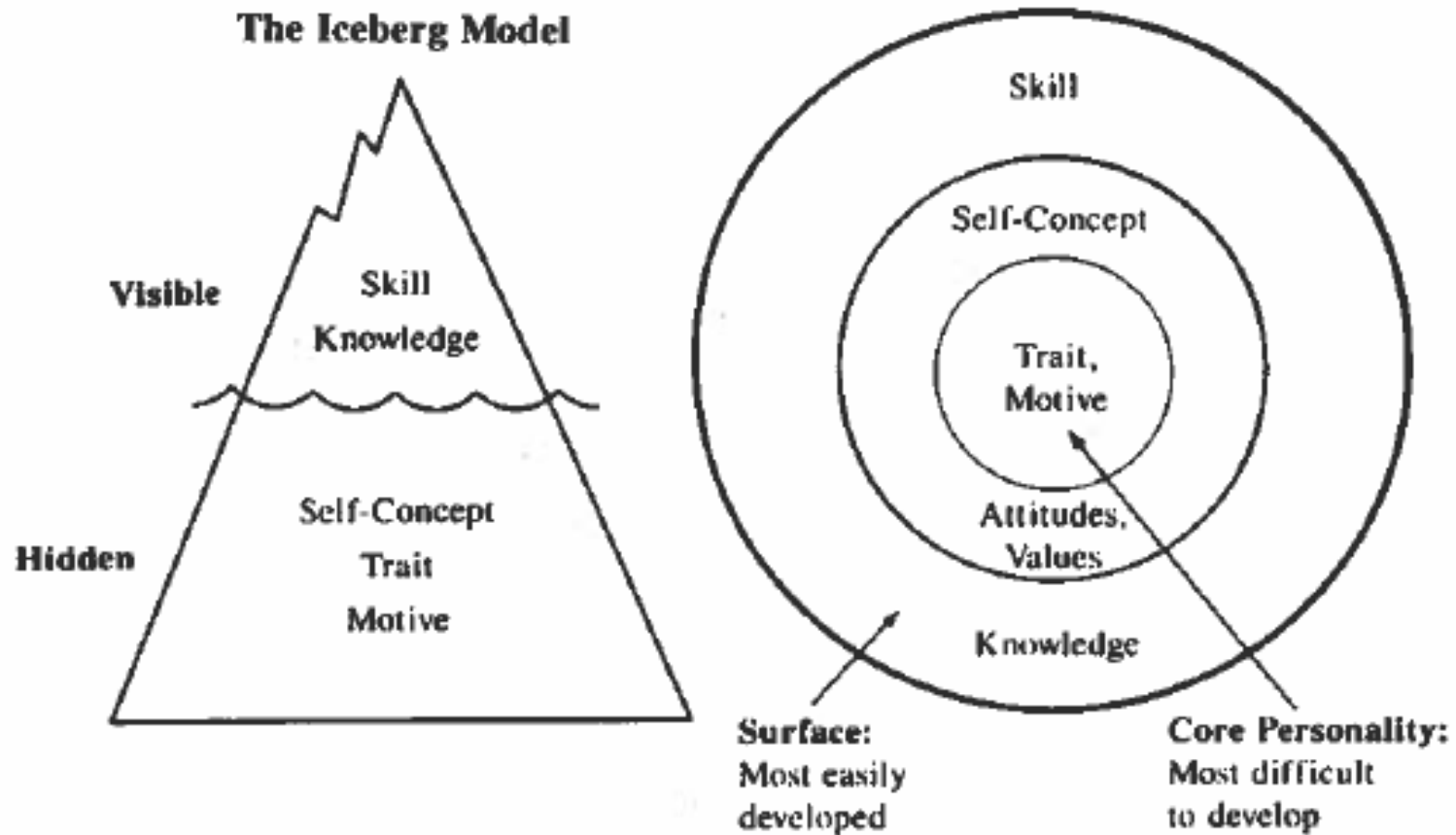
# So: does this prediction work?



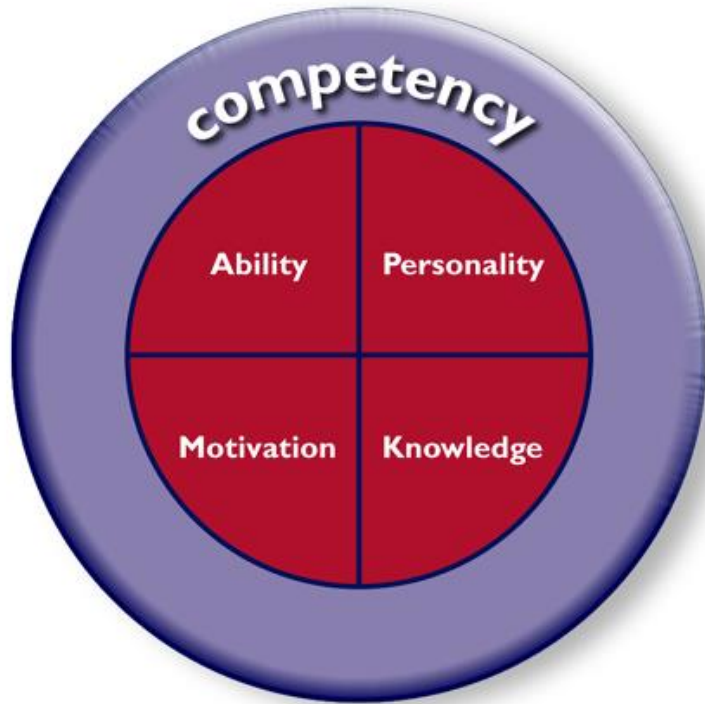
# Are there (better) alternatives?

- ▶ McClelland, D. C. (1973). Testing for Competence Rather Than Intelligence. *American Psychologist*, 28, 1-14.
- ▶ 2 major motivations (not real today, but ...):
  - ▶ classical psychological indicators (and tests) do not predict career/life success;
  - ▶ classical psychological indicators (and tests) are biased against minorities (gender, ethnicity etc.)

# Competencies



# What are competencies?



"A competency is the **repertoire** of capabilities, activities, processes and responses available that enable a range of work demands to be met **more effectively** by some people than by others."

*Bartram and Kurz (2002)*



# And why are they important?

- ▶ Because
  - ▶ they shift the assessment process from psychological traits to behavioral constructs
  - ▶ they de-emphasize internal states and emphasize observable behaviors
  - ▶ they are less universal and more job-specific
  - ▶ are more valid predictors (or, some would argue, criteria ...)

# Psychological vs. behavioral measurement

- ▶ Observation > Psych. observation > Job Simulation / Assessment Centre (AC)
- ▶ Interview > Psych. Interview > Competency-Based Beh. Intw. (CBI)
- ▶ Inventory > Personality inventory > Multi-Rater Feedback (360)
- ▶ Test > Ability test > Situational Judgment Test (SJT)

# The Assessment Center/Centre

- ▶ A unique combination of assessment methods
- ▶ Favors a Multitrait-Multisource-Multirater-Multimethod-Multitime approach
- ▶ May include tests (cognitive ability, personality)
- ▶ May include interviews (especially CBI)
- ▶ Will include behavioral observation based on realistic job simulations
  - ▶ In-tray exercises
  - ▶ Group activities
  - ▶ Role plays
  - ▶ Analyses & presentations
  - ▶ ...

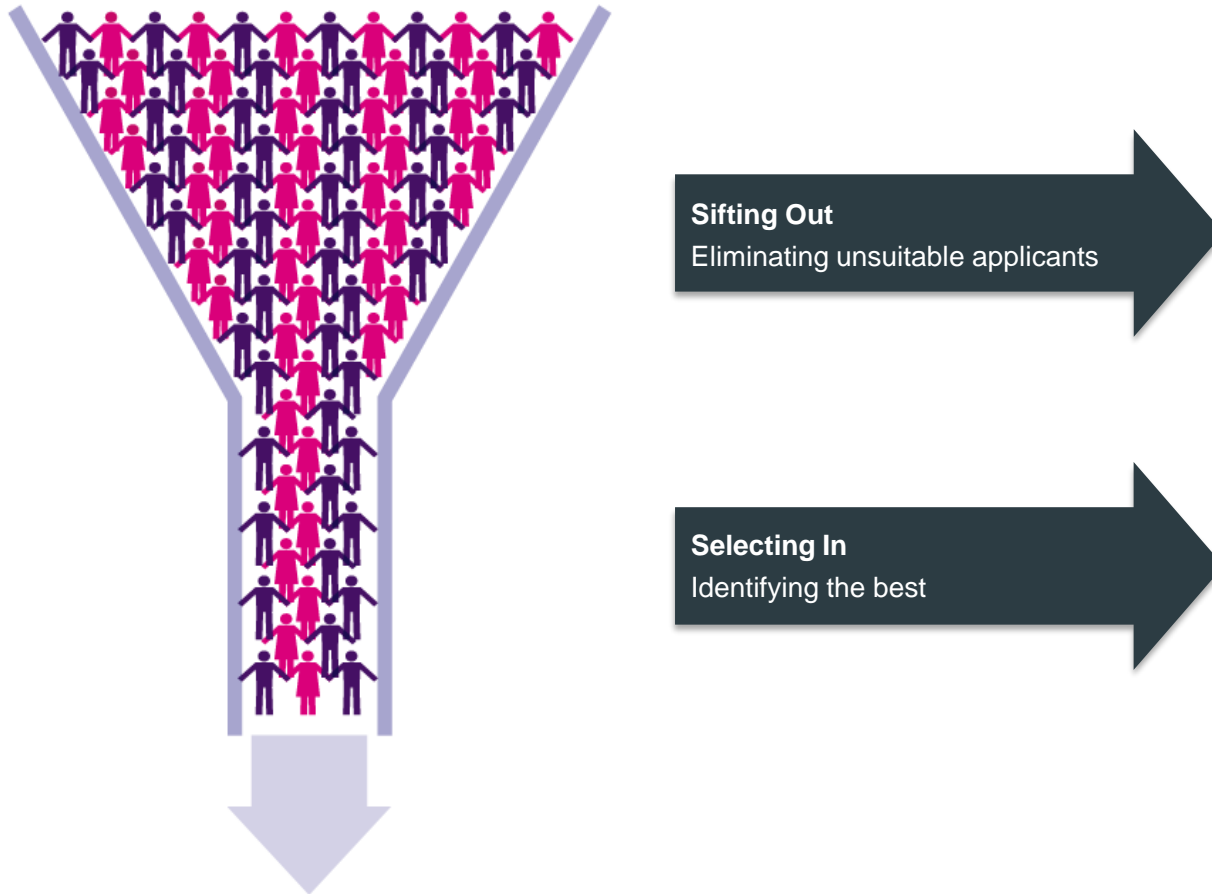
# The Assessment Center/Centre

- ▶ Hugely popular, especially for high-stake decisions for higher ranked personnel
- ▶ Extremely valid, if conducted correctly
  - ▶ International Task Force on Assessment Center Guidelines (2000, *Guidelines and Ethical Considerations for Assessment Center Operations*)
- ▶ Essential elements:
  - ▶ job analysis
  - ▶ behavioral classification
  - ▶ assessment techniques / assessment matrix
  - ▶ job-related simulations
  - ▶ assessors (multiple & trained)
  - ▶ data recording & integration

# However, there are problems ...

- ▶ Namely, 2 problems:
  - ▶ Difficult to develop
  - ▶ Very expensive
- ▶ Because of difficulty in development:
  - ▶ usually developed by consultancy companies, sold to businesses
  - ▶ e.g., SHL, A&DC
  - ▶ these exercises do not have the face validity (and realistic sense) needed for the military organization
- ▶ Because of costs
  - ▶ avoided even though needed
  - ▶ military organizations do not afford the prices, so do not use them

# ACs are best deployed during the final stages of multiple-hurdle selection processes



# ACs should be seen as an investment, not as a cost

- ▶ An introduction to the Taylor-Russell Model (HR econometrics)
- ▶ Base Rate (Success Rate)
  - ▶ The proportion of actual job incumbents who have been recruited without the usage of the current method (or based on "a-priori strategies") and who perform well (have job success)
- ▶ Selection Ratio
  - ▶ The proportion of candidates who are selected
- ▶ Test Validity
  - ▶ The relationship between test scores and job performance

# An example ...

- ▶ 100 applicants for 20 customer service positions
- ▶ (Selection ratio is 0.20)
  
- ▶ 60 out of these 100 applicants (60%) are likely to perform well
- ▶ (Base rate of 0.60)
  
- ▶ If applicants were selected **at random** we would expect:
  - 12 are likely to be successful in the job (60% of 20 selected)
  - 8 are likely to be unsuccessful (40% of 20 selected)
  
- ▶ These numbers are improved by using a valid selection process/test!





# Practical implications

- ▶ A-priory strategy:
  - ▶ 12 performant
  - ▶ 8 not performant
- ▶ Test-based strategy:
  - ▶ 16 performant
  - ▶ 4 not performant
- ▶ Behavioral assessment strategy:
  - ▶ 19 performant
  - ▶ 1 not performant
- ▶ Multiply by?
  - ▶ number of selections: 20? 200? 2000 every year?
  - ▶ cost of mis-decision: EUR 1500 (low-level commercial) - EUR 7000 (mid-level comm.)

# ACs in the Military

- ▶ ACs were actually invented in the military
  - ▶ military officer recruitment in Germany and UK, between the I and II WW
  - ▶ first industrial application: Douglas W. Bray at American Telephone and Telegraph (AT&T) during the 1950's
- ▶ A number of countries consistently use ACs for officer recruitment and officer development
- ▶ Few report on their procedures with empirical data
  - ▶ One of those who consistently do so are the Canadian Armed Forces
  - ▶ Best practice example: Canadian Forces Military Police Assessment Centre (MPAC)

# The Canadian Forces Military Police Assessment Centre (MPAC)

- ▶ Three-day process during which candidates were assessed on 12 competencies;
  - ▶ (1) Integrity; (2) Analytical Thinking; (3) Decision Making; (4) Personal Impact; (5) Interpersonal Skills; (6) Tolerance; (7) Conscientiousness; (8) Performance Under Stress; (9) Teamwork; (10) Practical Intelligence; (11) Oral Communication Skills; (12) Written Communication Skills
- ▶ The 12 competencies were assessed using six different methods:
  - ▶ (1) Group Dynamics exercise; (2) Structured Interview; (3) Role Play Exercise; (4) Background Integrity Interview; (5) Skills Test; (6) Fact Find Exercise

# The 12 competencies of the MPAC

Competency	n	Cronbach's alpha	lowest item-total correlation
1. Integrity	233	.48	.26
2. Analytical Skills	181	.55	.34
3. Decision Making	153	.50	.26
4. Personal Impact	154	.64	.28
5. Interpersonal Skills	144	.54	.23
6. Tolerance	96	.55	.30
7. Conscientiousness	83	.61	.32
8. Stress Tolerance	73	.56	.22
9. Teamwork	279	.48	.33
10. Practical Intelligence	145	.26	-.06
11. Oral Communications	153	.69	.41
12. Written Communications	242	.40	.25

# The 5 methods of the MPAC

Method	n	Cronbach's alpha	lowest item-total correlation
1. Group Dynamics	118	.94	.62
2. Structured Interview	224	.87	.55
3. Fact Find Exercise	107	.90	.30
4. Background/Integrity Interview	290	.82	.52
5. Role Play	156	.94	.54

COMPETENCY	GROUP DYNAMICS (I)	STRUCTURED INTERVIEW	SKILLS TEST	FACT FIND EXERCISE	B/I INTERVIEW	ROLE PLAYS	GROUP DYNAMICS (II)
INTEGRITY		X			X	X	
ANALYTICAL SKILLS	X			X		X	
DECISION MAKING	X			X		X	
PERSONAL IMPACT	X	X		X	X	X	
INTERPERSONAL SKILLS	X	X		X	X	X	
TOLERANCE	X	X		X		X	
CONSCIENTIOUSNESS	X	X		X		X	
PERFORMANCE UNDER STRESS	X	X		X		X	
TEAMWORK	X	X					
PRACTICAL INTELLIGENCE	X		X	X		X	
ORAL COMM SKILLS	X	X		X	X	X	
WRITTEN COMM SKILLS	N/O	N/O	X	X	N/O	N/O	N/O

# Practical implications

- ▶ Cost for setup: approx. \$350,000
  - ▶ based on both internal expertise and external (commercial/business) expertise
  - ▶ timing: 2 years, including validity and assessor training
- ▶ Cost for running the process: approx. \$400 / candidate
- ▶ Estimated gain: \$4.5 M / year



# Conclusions

- ▶ behavioral assessment is the most powerful assessment approach in the repertoire of selection methods
- ▶ but it requires psychologists to rethink their approach:
  - ▶ psychological testing is only subsumed and does not drive behavioral assessment
- ▶ especially in the armed forces, the implementation of ACs may encounter a number of hurdles:
  - ▶ requires a change in the status quo
  - ▶ low quality of badly designed ACs hamper the utility of this method on the face of decision-makers
  - ▶ high costs of development may be a deterrent



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