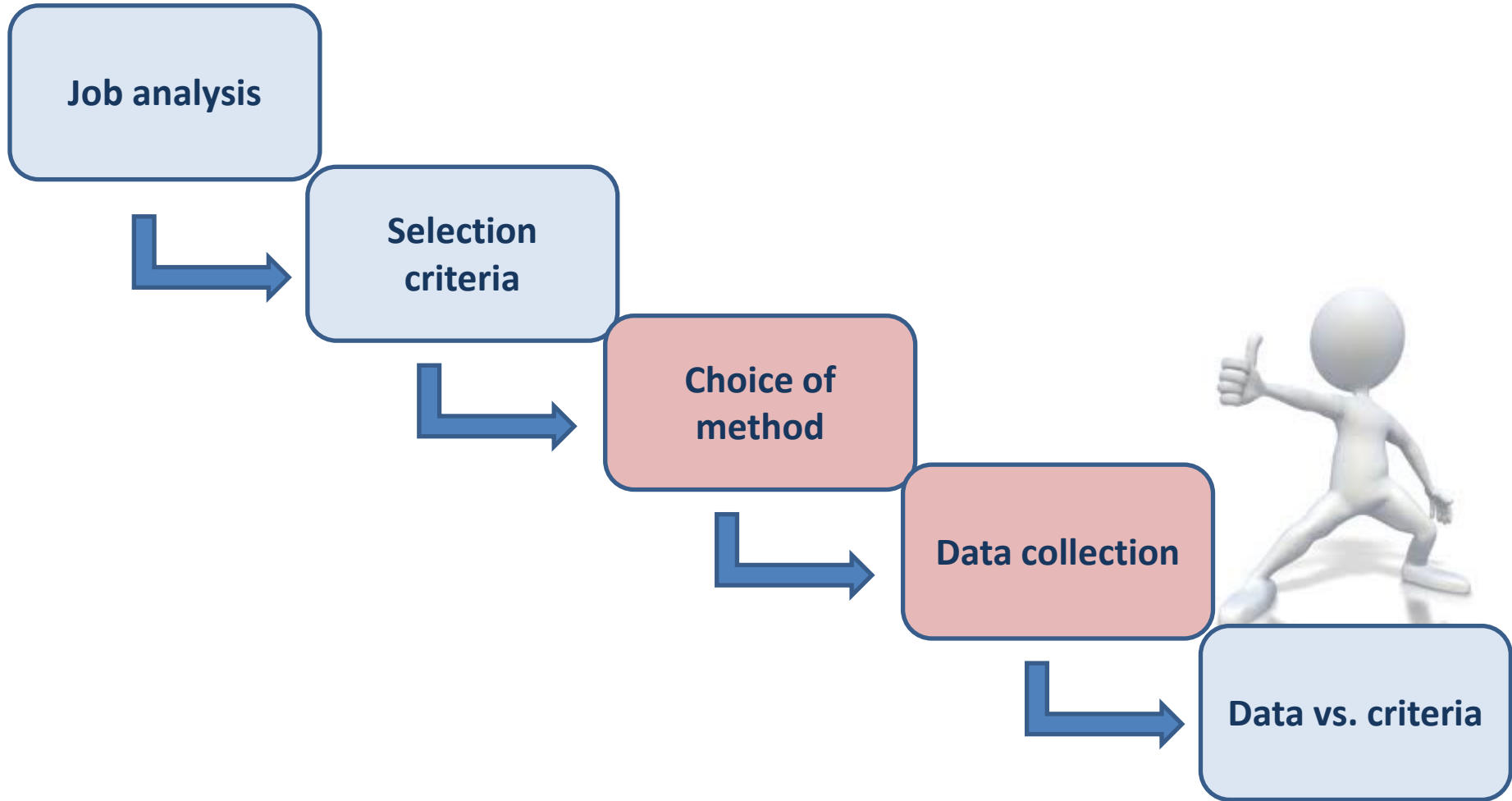


# Personnel selection methods

Jakub Procházka

Human Resources Management

# Context of the selection procedure



# Typical criteria for personnel selection

GMA

General mental ability, intelligence

Personality

Conscientiousness: how will invest energy  
Agreeableness: will treat others with respect  
Emotional stability: will be resistant to stress

Integrity

Strong moral principles

Professional competences

Specific for each job

Soft skills

Leadership, communication, teamwork...

Experience

Network, tacit knowledge...

# The most commonly used selection methods

## **Self-selection:**

- Description of specific requirements for applicants

## **Biographical data:**

- CV
- Motivation letter
- Questionnaire on previous experience
- References

## **Interviews:**

- Telephone interview
- Unstructured interview
- Situational interview
- Behavioral interview

## **Sample problems:**

- Work sample test
- Fictitious problems
- Assessment centre\*

## **Psychometric tests/questionnaires:**

- GMA tests
- Performance tests (e.g. attention)
- Integrity tests
- Personality questionnaires
- Proficiency tests (e.g. knowledge tests, language tests)
- Projective methods

## **Real situations:**

- Internships
- Trainee programmes
- Job tryouts
- Student competitions
- Headhunting

\*may also include psychodiagnosis, interview and other methods

# Predictive validity of selection methods

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Frank L. Schmidt  
University of Iowa

John E. Hunter  
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conscientiousness and personal integrity, structured employment interviews, and (for experienced workers) job knowledge and work sample tests.

**Table 1**  
*Predictive Validity for Overall Job Performance of General Mental Ability (GMA) Scores Combined With a Second Predictor Using (Standardized) Multiple Regression*

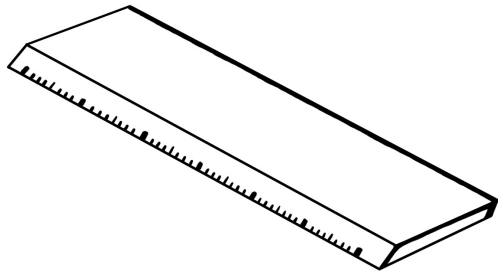
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					GMA	Supplement
GMA tests <sup>a</sup>	.51					
Work sample tests <sup>b</sup>	.54	.63	.12	24%	.36	.41
Integrity tests <sup>c</sup>	.41	.65	.14	27%	.51	.41
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Employment interviews (structured) <sup>e</sup>	.51	.63	.12	24%	.39	.39
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Job tryout procedure <sup>h</sup>	.44	.58	.07	14%	.40	.20
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Reference checks <sup>k</sup>	.26	.57	.06	12%	.51	.26
Job experience (years) <sup>l</sup>	.18	.54	.03	6%	.51	.18
Biographical data measures <sup>m</sup>	.35	.52	.01	2%	.45	.13
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Graphology <sup>r</sup>	.02	.51	.00	0%	.51	.02
Age <sup>s</sup>	-.01	.51	.00	0%	.51	-.01

# Validity

- To what extent does the instrument measure what it is supposed to measure

If I measure the height of 1,000 people by repeatedly attaching this ruler:

- Would such a measurement be consistent with the theory of how height should be measured?
- Will I measure the same result as if I used a certified platinum-iridium alloy ruler at normal atmospheric pressure and 0 °C?
- If I line people up by size according to measurements, does the optical comparison confirm the result?
- Will the result allow me to predict who will bang their head on the door frame?

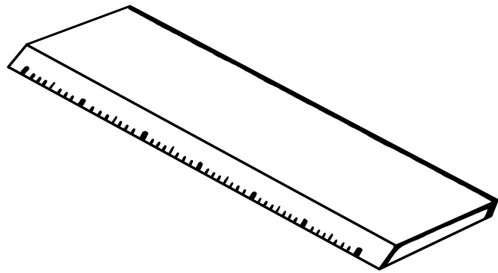


# Reliability

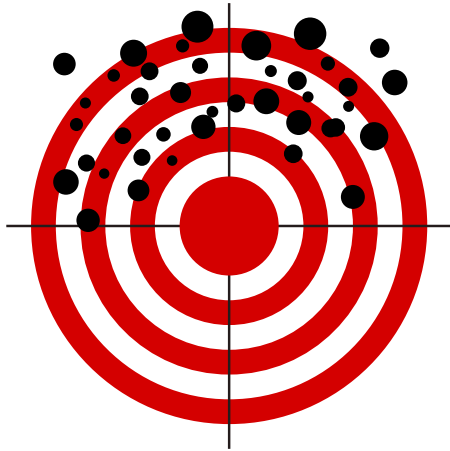
- How consistent the results provided by the instrument are in the conditions where they should be consistent.

If I measure Peter's height by repeatedly attaching this ruler:

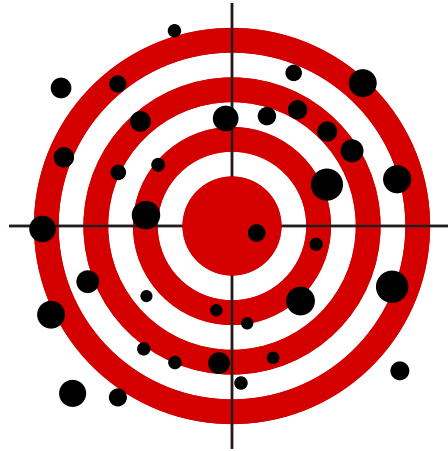
- Will I get the same result every time when I measure him 10 times?
- Will I get the same result if I measure him with the first half of the ruler and the second half of the ruler?
- Will I get the same result as Kate and John if they measure Peter's height with the same ruler?



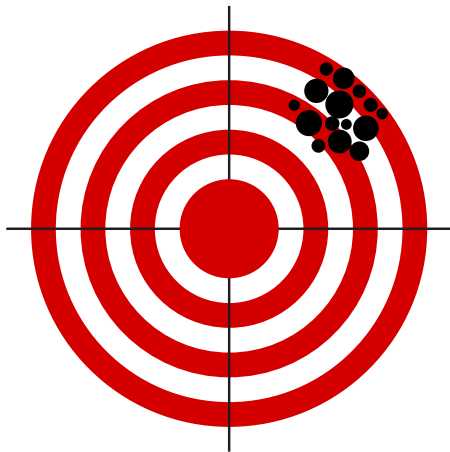
# Reliability and validity



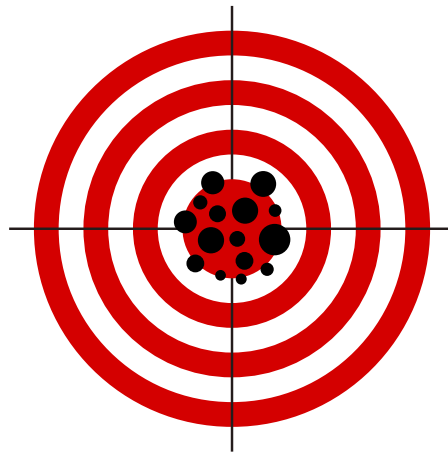
Unreliable and not valid



Unreliable and therefore not valid



Reliable but not valid



Reliable and valid

Source: Nevit Dilmen



# Reliability and validity

- The method must have sufficient reliability and validity to be trusted.
- A method with low reliability cannot be valid.

*Example: I want to predict work performance using a crystal ball. Different fortune tellers using the same ball will arrive at different predictions (low reliability). Such a prediction will probably not be valid (low validity).*

- A method with high reliability may not be valid.

*Example: I predict job performance of sales representative by measuring his height by a certified platinum-iridium ruler. I measure height very reliably (high reliability), but the performance prediction is probably not valid (low validity) because corporal height is not very useful for sales predictions.*

- **I need to consider the validity and reliability of selection method which I want to use.**
- **The supplier should be able to provide the data (validation study).**

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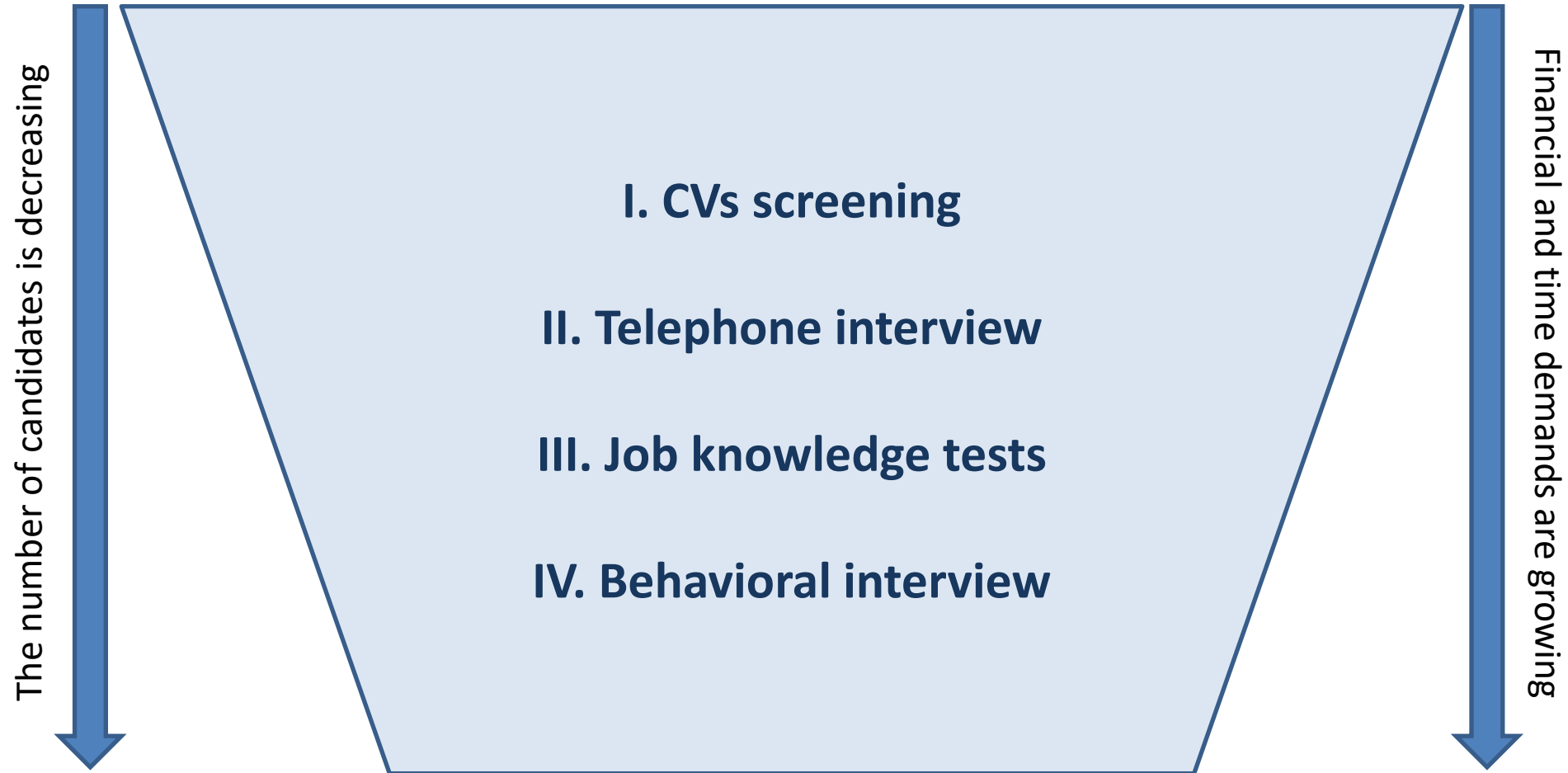
conscientiousness and personal integrity, structured employment interviews, and (for experienced workers) job knowledge and work sample tests.

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# Selection procedure

Example:



# Employment interview: validity

- Trained interviewer(s)
- Same interviewer(s) for all candidates
- Recording answers, note-taking

## Structure:

- Preset criteria relevant to the position, same for all candidates
- Preset questions, relevant to criteria, same for all candidates
- Scoring each response individually
- Scoring by comparing the response with the criteria

	Corrected simple correlation	Corrected partial correlation
Interviewer training	.41**	0.16
Interviewer standardization	.31**	0.04
Note-taking	.36**	-0.09
Individual vs. panel	-0.05	-0.16
Level of structure	.63**	

# Behavioral interview

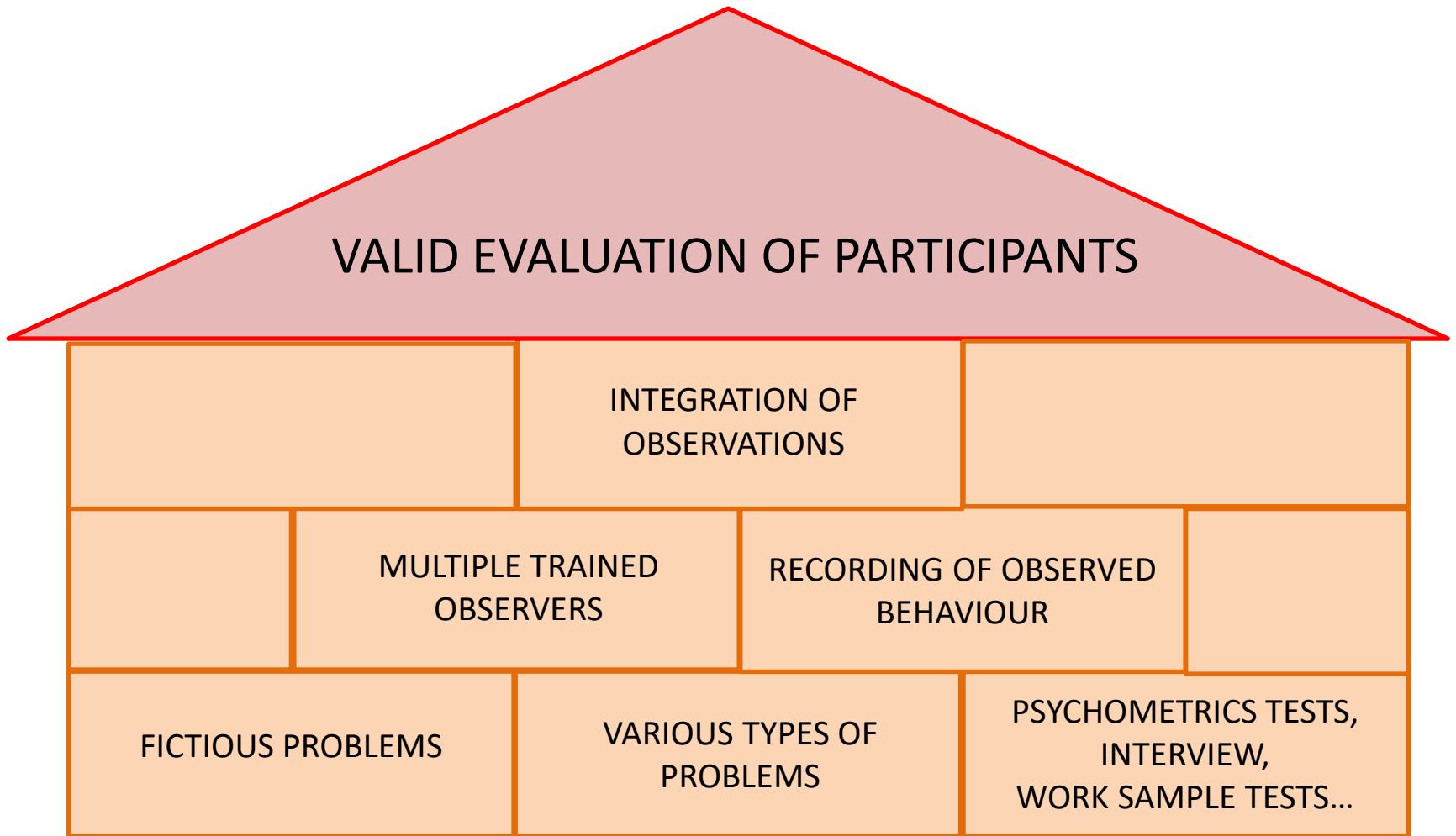
- Premise: „The best predictor of future behaviour is past behaviour“
- Structured interview focused on pre-selected competencies
- Open questions on past behaviour
- Asking for specific examples
- STAR structure: Situation, Task, Action, Result
- Search for evidence and counter-evidence

Describe a situation in which you...?  
What was your goal in this situation?  
What exactly did you do...?  
Please give an example...  
What was the result?  
Have you ever acted differently in a similar situation?

# Work sample test



# Assessment centre



# Fictitious problems

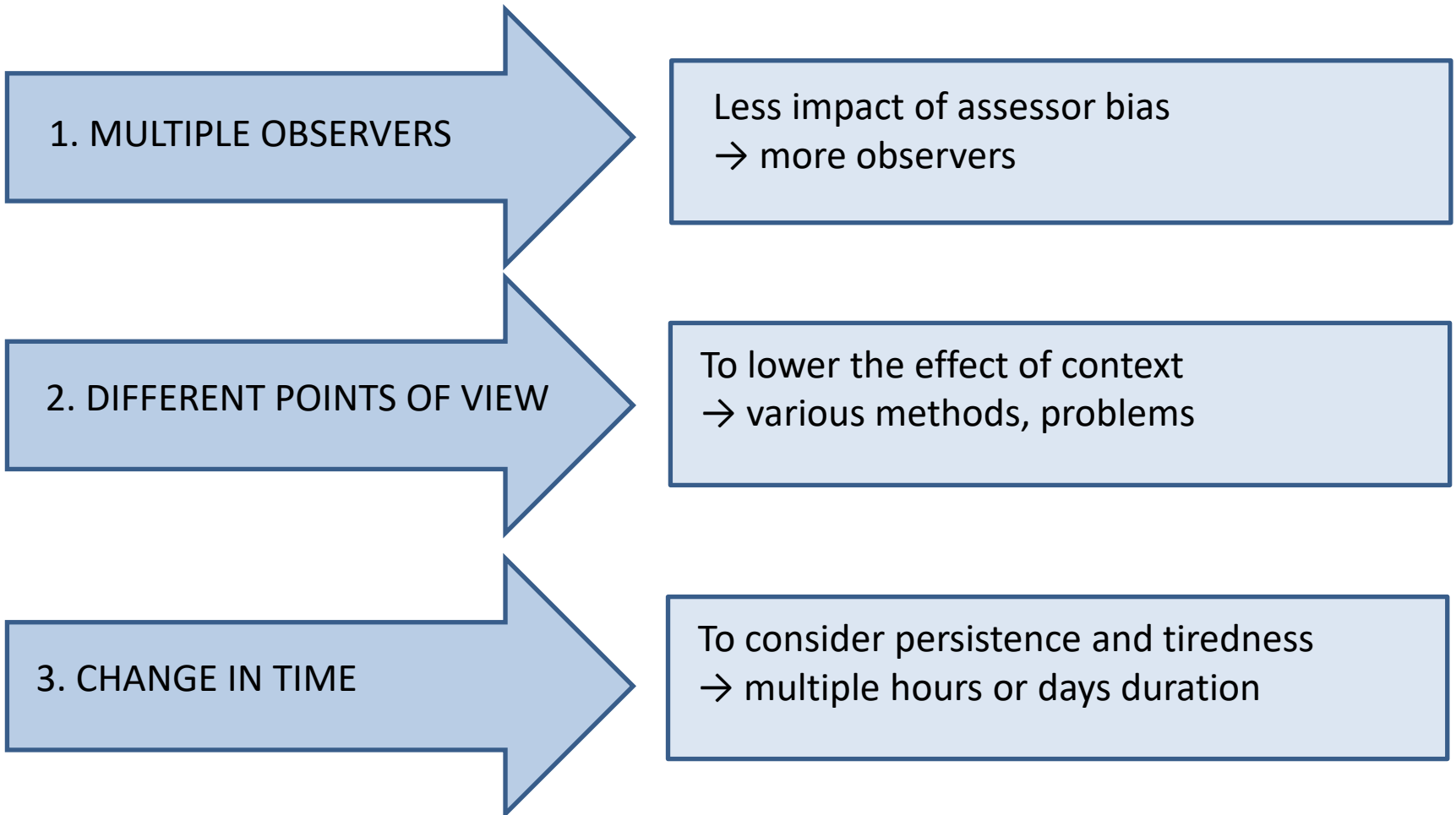
You are driving along in your car on a wild, stormy night. You pass by a bus stop, and you see three people waiting for the bus:

1. An old lady who looks as if she is about to die.
2. An old friend who once saved your life.
3. The perfect man (or) woman you have been dreaming about.

Which one would you choose to offer a ride to, knowing that there could only be one passenger in your car.



# Principles of AC



# Sample program of AC



08:00 Assessors meeting

09:00 Welcome, schedule

09:15 Group task: logical problem

10:00 Group task: creative problem

10:45 Break

11:00 Group task: conflict situation

12:00 Lunch

13:00 A: Two individual tasks + structured interview

B: Tests, written tasks

16:00 Farewell

16:15 Assessors meeting

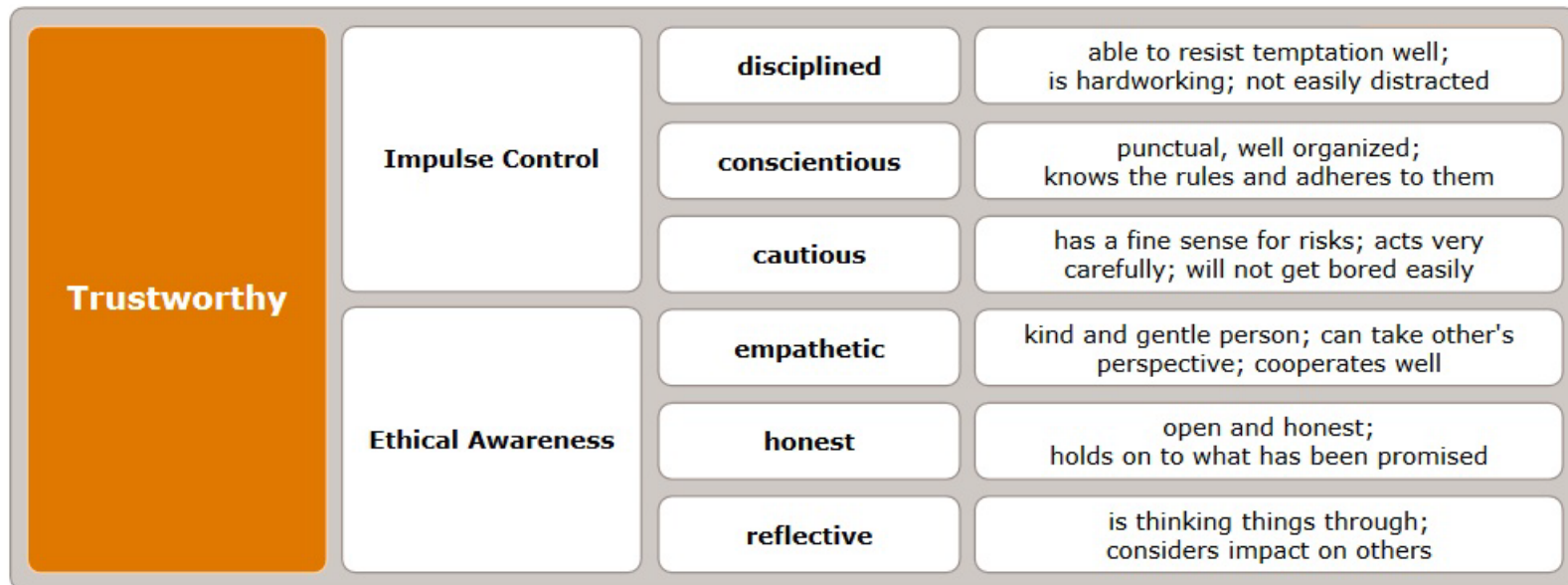
18:30 Closing of AC



# Integrity test



## squares – concept model



*scales correspond with critical aspect of situation; high levels = low susceptibility regarding critical aspect of situation*

[www.cut-e.com](http://www.cut-e.com)

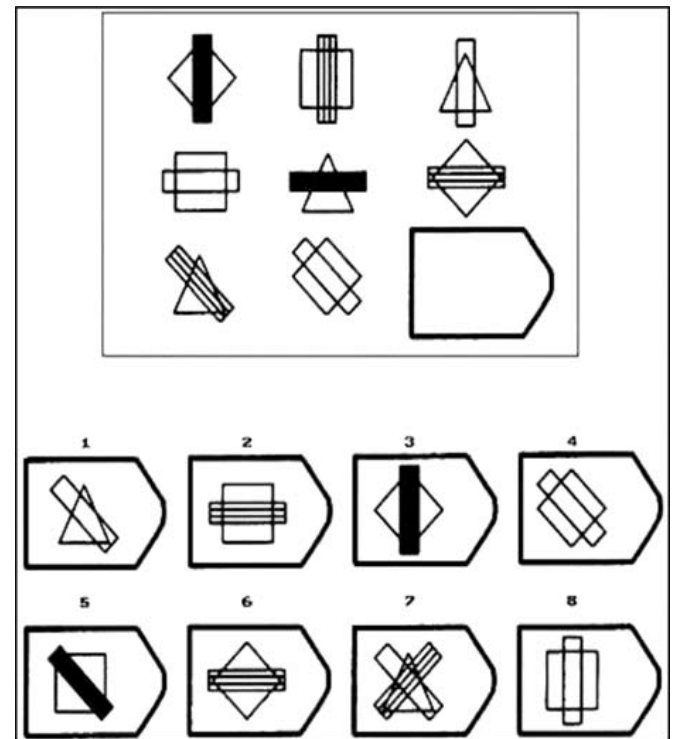
Questionnaire, 36 questions, 7.5 minutes average administration, internal consistency > .85

# GMA tests

**Group administration** x Individual administration

Multidimensional x One-dimensional

Computer administered x Paper-pencil



Raven progressive matrix

# Recommended resources

*Journal of Organizational Behavior*  
*J. Organiz. Behav.* **20**, 549–560 (1999)

## Further analysis of employment interview validity: a quantitative evaluation of interviewer-related structuring methods

ALLEN I. HUFFCUTT<sup>1\*</sup> AND DAVID J. WOehr<sup>2</sup>

<sup>1</sup>*Department of Psychology, Bradley University, Peoria, Illinois 61625, U.S.A.*

<sup>2</sup>*Department of Psychology, Texas A&M University, College Station, Texas 77845, U.S.A.*

### Summary

The purpose of this investigation was to analyze the relationship between four interviewer-related factors and the validity of the employment interview. Using a regression approach to meta-analysis, an analysis of 120 interview studies with a total sample size of 18,158 suggested that: (1) training should be provided to interviewers regardless of whether the interview itself (i.e. the questions and rating scales) is

Psychological Bulletin  
1998, Vol. 124, No. 2, 262–274

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0033-2909/98/\$3.00

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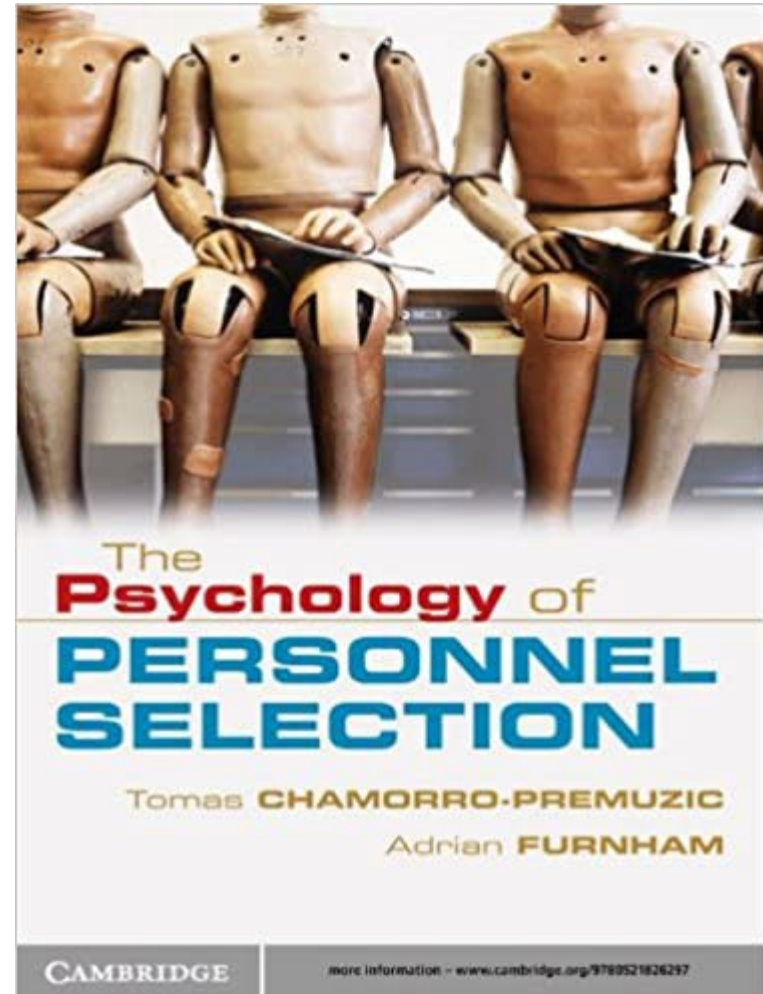
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From the point of view of practical value, the most important property of a personnel assessment method is predictive validity: the ability to predict future job performance, job-related learning (such as amount of learning in training and development pro-

conscientiousness and personal integrity, structured employment interviews, and (for experienced workers) job knowledge and work sample tests.

On the basis of meta-analytic findings, this article examines



Thank you for your attention...