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PEDAGOGISCHE WETENSCHAPPEN

## **Stirring Things Up in Assessment: Towards Hybrid Assessment Centres**

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VOLATILITY  
UNCERTAINTY  
COMPLEXITY  
AMBIGUITY

## **Objectives**

Evidence-based overview of modular/ hybrid talent assessment approaches

Reinforcement & inspiration for innovating talent assessment practices



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# **Traditional Talent Assessment Answers**

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## Meta-analyses About Meta-Analyses

Selection procedure	Correlation with job performance
Cognitive ability test	.51
Knowledge test	.48
Personality inventory	
Extraversion	.10
Agreeableness	.06
Emotional stability	.07
Conscientiousness	.23
Openness	-.03
Work sample	.54
Assessment center	.37

Schmidt & Hunter (1998)

## Meta-Analyses About Meta-Analyses

Selection procedure	Correlation with job performance
Structured interview	.51
Situational Judgment Test	.26
Probationary period	.44
References	.26
Working experience	.18
Educational level	.10
Interest	.10
Graphology	.02
Age	-.01
...	

Schmidt & Hunter (1998)

*“Some authors are critical of the personnel selection field, given the magnitude of the validities reported. However, if one considers the complexity of the job performance phenomena and the organizational constraints on performance and our ability to define and measure performance, the size of the coefficients actually represents one of the most remarkable achievements of psychology.”*

Schmitt (1993)

## Comparison Medical Field

Meyer, Finn, Eyde, Kay, Moreland, Dies, Eisman, Kubiszyn, & Read (2001)

Common medical procedure	<i>r</i>	<i>N</i>
Bypass surgery & 5 year survival	.08	2649
Smoking & lung cancer within 25 years	.08	3956
Antihistamines & reduced snot & sneezing	.11	1023
Effects of Iboprufen on pain reduction	.14	8488
Viagra & improved sexual functioning	.38	779

# Meta-Analytic Effect Sizes & Intercorrelations

## DERIVATION AND IMPLICATIONS OF A META-ANALYTIC MATRIX INCORPORATING COGNITIVE ABILITY, ALTERNATIVE PREDICTORS, AND JOB PERFORMANCE

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## TOWARD BETTER META-ANALYTIC MATRICES: HOW INPUT VALUES CAN AFFECT RESEARCH CONCLUSIONS IN HUMAN RESOURCE MANAGEMENT SIMULATIONS

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Predictor	Effect Size	1.	2.	3.	4.	5.
1. Cognitive Ability	.72					
2. Structured Interview	.31	.31				
3. Conscientiousness	.06	.03	.26			
4. Biodata	.57	.37	.17	.31		
5. Integrity	.04	.00	.00	.39	.25	
6. Job Performance	.27	.51	.48	.22	.32	.41

# Assessment Centre Research

PERSONNEL PSYCHOLOGY  
2008, 59

## A META-ANALYSIS OF THE CRITERION-RELATED VALIDITY OF ASSESSMENT CENTER DIMENSIONS

WINFRED ARBITUR, JR.  
Department of Psychology  
Texas A&M University

ERIC ANTHONY DAY  
Department of Psychology  
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THERESA L. MCNEELY, PAMELA S. EDENS  
Department of Psychology  
Texas A&M University

Journal of Applied Psychology  
2008, Vol. 93, No. 3, 582-592

## Further Evidence for the Validity of Assessment Center Dimensions: A Meta-Analysis of the Incremental Criterion-Related Validity of Dimension Ratings

John P. Meriac  
University of Tennessee, Knoxville

Brian J. Hoffman  
University of Georgia

David J. Woehr and Matthew S. Fleisher  
University of Tennessee, Knoxville

Copyright 2008 by the American Psychological Association  
0275-8048/08/\$12.00 DOI: 10.1037/a0013682

Journal of Applied Psychology  
2008, Vol. 93, No. 3, 685-691

## Ethnic and Gender Subgroup Differences in Assessment Center Ratings: A Meta-Analysis

Michelle A. Dean  
San Diego State University

Philip L. Roth  
Clemson University

Philip Bobko  
Gettysburg College

Copyright 2008 by the American Psychological Association  
0021-9010/08/\$12.00 DOI: 10.1037/a0013685

## Traditional Approach

Impressive **cumulative** scientific evidence

Selection procedures as **holistic** entities





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# Agile Talent Assessment Answers

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## Product Design

	<b>Holistic</b>	<b>Modular</b>
Synonyms	“All-in-one”	“Building Block”
Features	Integrated system	System broken down in smaller components
	Interdependence Closely coupled	Independence Loosely coupled
Key advantage	Performance	Flexibility
Examples		

## Breaking Down Selection Procedures

<b>Component</b>	<b>ACs</b>	<b>Structured interview</b>	<b>Personality inventory</b>
<b>Constructs</b>	Competencies	Competencies	Big Five
<b>Stimulus format</b>	Behavioural (written, oral)	Oral	Written
<b>Stimulus presentation consistency</b>	Free/Flexible	Fixed	Fixed
<b>Contextualization</b>	High	Medium	Low
<b>Response format</b>	Open-ended (behavioural)	Open-ended (oral)	Close-ended (written)
<b>Response evaluation consistency (scoring)</b>	Trained rater	Trained rater	Machine scoring
<b>Response instruction</b>	...		
<b>Technology (medium)</b>	...		

## Modularity: Conceptual Benefits

Investigate isolated impact of components

▸ Gain insight in “why” & “when”

Uncover deeper **similarities** across tools

## Modularity: Practical Benefits

Increased product **variety**

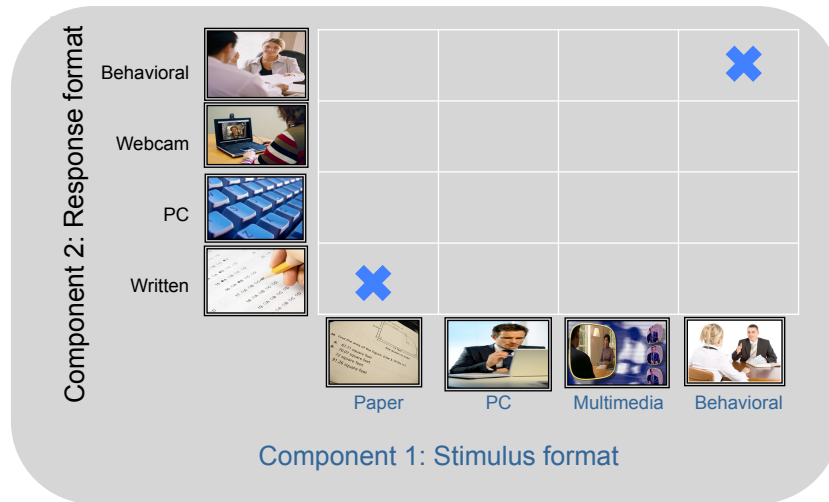
Increased design **flexibility**

Time & cost **efficiencies**

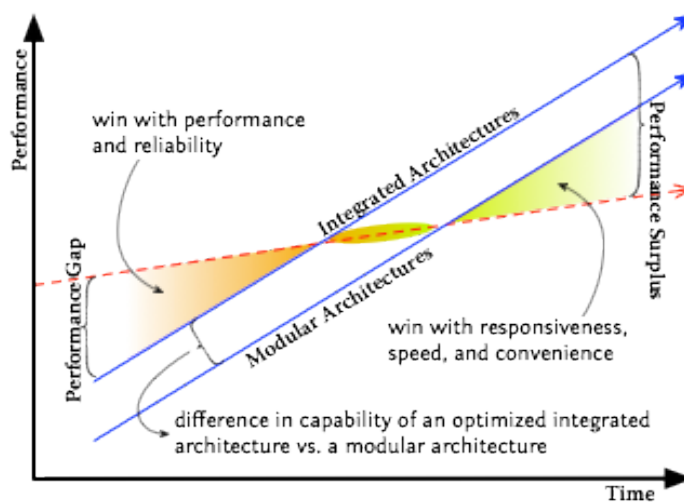
Higher **responsiveness** to customer demands

▸ Catalyst for innovation & change

## Building Hybrid Selection Procedures



## Modularity vs. Integration



## Overview: Three Examples

Webcam Assessment Centres

Big Five Assessment Centres

Speed Assessment

More info (downloadable articles) on  
<http://users.ugent.be/~flievens>



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# 1. Webcam Assessment Centres

Journal of Management  
Vol. XX No. X, Month XXXX xx-xx  
DOI: 10.1177/0149206312463941  
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Understanding the Building Blocks of Selection  
Procedures: Effects of Response Fidelity  
on Performance and Validity

Filip Lievens  
Wilfried De Corte  
*Ghent University*  
Lena Westerveld  
*Politecnico*

## The Idea

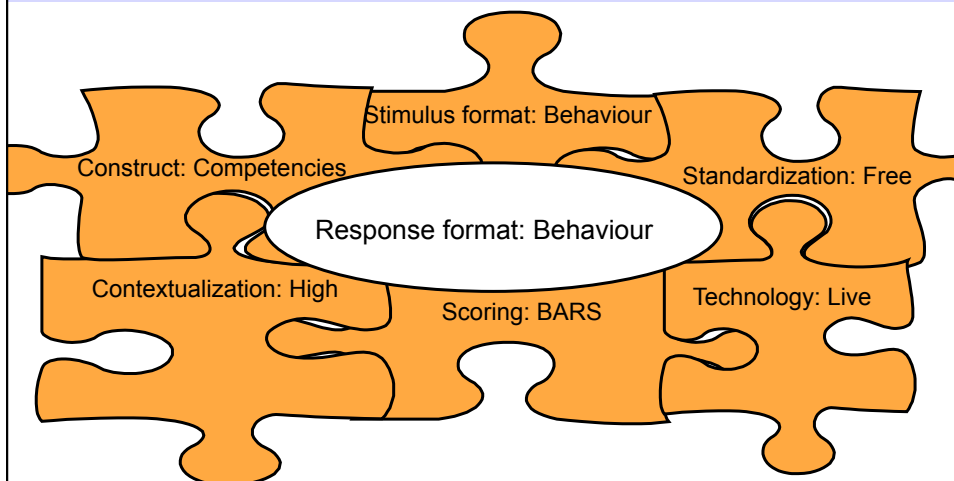
### ACs

- ▶ Limited sample of situations
- ▶ Interactions might differ depending on candidates
- ▶ Emphasis on (non)-verbal behaviour

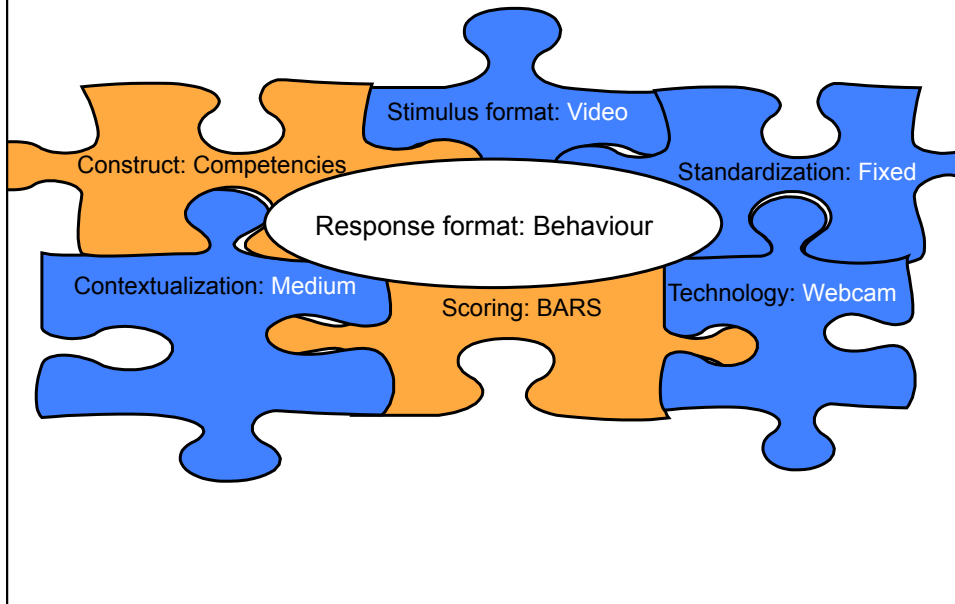
### SJTs

- ▶ Broader coverage of situations
- ▶ Standardized & structured situations
- ▶ Intentions/ knowledge instead of behaviour

## Breaking Down ACs



## Building Hybrid



## Context: Dutch Police Academy



208 applicants (entry-level officers)

- 12 multimedia scenes: open-ended behavioural response (webcam)
- 12 multimedia scenes: open-ended written response (text balloon)

## Applicant Experience

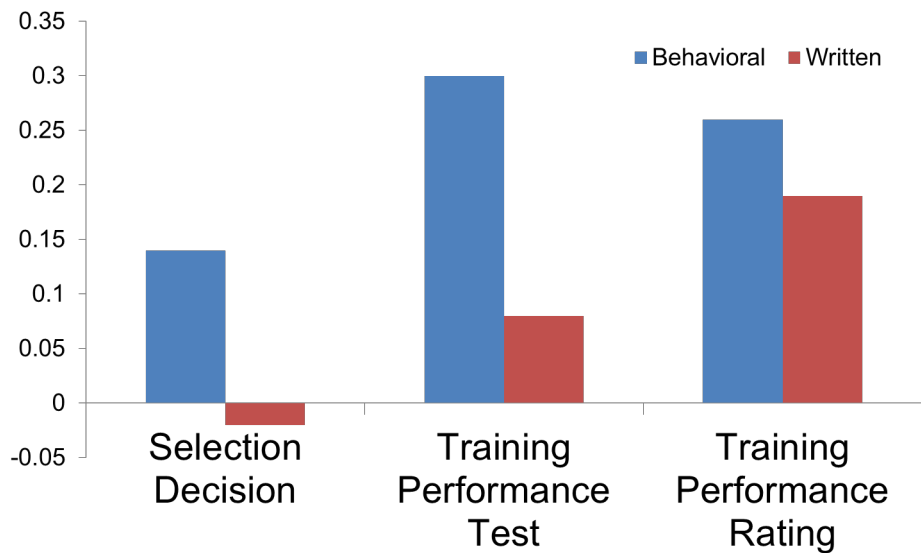
	Written (N = 208)	Behavioural (N = 208)
Excitement	3.18	3.19
Satisfaction	3.33	3.27
Job relatedness	3.95	3.99
Media richness	<b>2.95</b>	<b>3.08</b>

Ratings made on a 5-point scale: 1= *strongly disagree*; 5 = *strongly agree*

## Reliability

	Agreement (ICC)	
	Written	Behavioral
Overall	.81	.78
Sensitivity	.71	.75
Forcefulness	.70	.64
Communication	.71	.70
Integrity	.60	.65

## Validity



## Correlates

	Written	Behavioural
Verbal cognitive ability ( <i>N</i> = 208)	.18*	.08
Language proficiency ( <i>N</i> = 208)	.28**	.28**
Extraversion ( <i>N</i> = 104)	.01	.31**

## Gender Differences: Effect Sizes

	Written		Behavioural	
	Male (N = 126)	Female (N = 82)	Male (N = 126)	Female (N = 82)
Overall		-.31	.13	
Sensitivity		-.30		-.25
Forcefulness		-.13	.35	
Communication		-.35	.13	
Integrity		-.22	.20	

## Conclusions

### Promising reliability & validity evidence

- Isolated impact of response format
- Flexible (other potential hybrids)

### Caveats

- Reducing or increasing diversity?
- Resistance of assessors

## Food For Thought

Is such an assessment the modern streamlined & standardized **alternative** to assessment centres for screening purposes?

If such an assessment had existed already for over 50 years, would we **change** it to assessment centres?



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## 2. Big Five Assessment Centres

### Assessment Centers and the Measurement of Personality

*Neil D. Christiansen, Brian J. Hoffman,  
Filip Lievens, and Andrew B. Speer*

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## AC Dimensions & Personality: Meta-Analysis

(Meriac et al., 2008, JAP)

	<b>E</b>	<b>A</b>	<b>C</b>	<b>ES</b>	<b>O</b>
<b>Consideration &amp; awareness of others</b>	.10	.07	.14	.10	.09
<b>Communication</b>	.16	.13	.12	.11	.17
<b>Drive</b>	.29	.12	.14	.06	.08
<b>Influencing others</b>	.21	.11	.13	-.02	.11
<b>Organizing and planning</b>	.13	.03	.07	.09	.12
<b>Problem solving</b>	.11	.09	.17	.09	.14
<b>Tolerance for stress &amp; uncertainty</b>	.17	.09	.17	.10	.15

## AC Exercises & Personality: Meta-Analysis

(Monahan et al., in press, JAP)

	<b>E</b>	<b>A</b>	<b>C</b>	<b>ES</b>	<b>O</b>
<b>Case Analysis</b>	-.01	-.05	.03	.06	.15
<b>Leaderless Group Discussion</b>	.15	.00	.05	.09	.08
<b>In-Basket</b>	.07	-.03	.16	.05	.06
<b>Oral Presentation</b>	.17	-.13	.11	.08	.14
<b>Role Play</b>	.12	.01	.02	.04	.14

## Assessor Notes

### Personality adjectives used

- In basket: C
- Group discussion: E
- Presentation: ES

Journal of Occupational and Organizational Psychology (2001), 74, 623-636 Printed in Great Britain 623  
© 2001 The British Psychological Society

#### **Assessors' use of personality traits in descriptions of assessment centre candidates: A five-factor model perspective**

**Filip Lievens\*** and **Filip De Fruyt**  
Ghent University, Belgium

**Karen Van Dam**  
Tilburg University, The Netherlands

## The Idea

### ACs

▸ Measurement of dimensions: Achilles' Heel

▸ Emphasis on (non)-verbal behaviour

### Big Five

▸ Excellent construct-related validity

▸ Emphasis on fakable inventories

### **Psychology as the Science of Self-Reports and Finger Movements**

**Whatever Happened to Actual Behavior?**

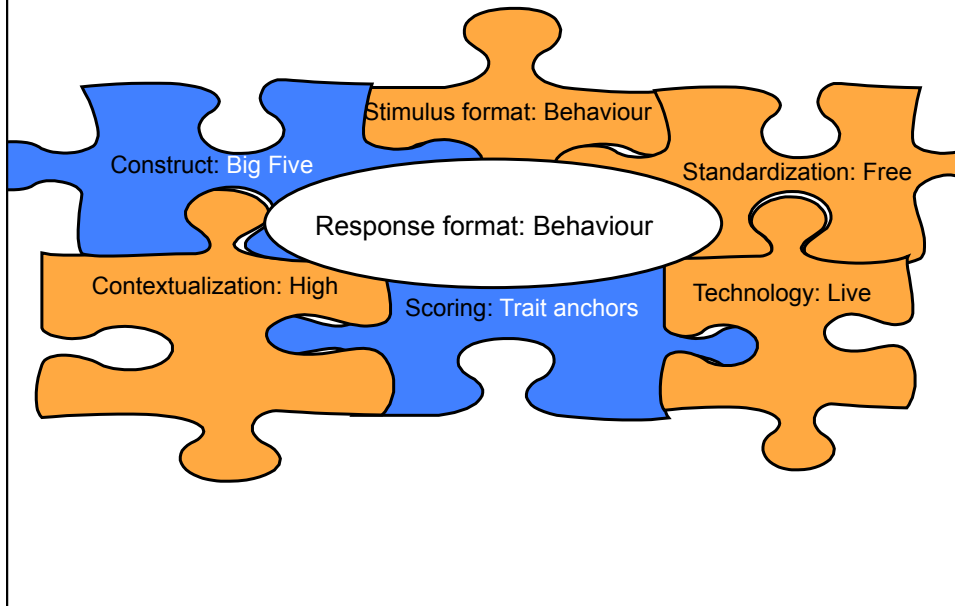
Ray E. Hammeister,<sup>1</sup> Kathleen D. Vohs,<sup>2</sup> and David C. Funder<sup>3</sup>

European Journal of Personality  
Eur. J. Pers. 23: 369-401 (2009)  
Published online in Wiley InterScience  
(www.interscience.wiley.com) DOI: 10.1002/per.724

**Personality Psychology as a Truly Behavioural Science**

**R. MICHAEL FURR\***

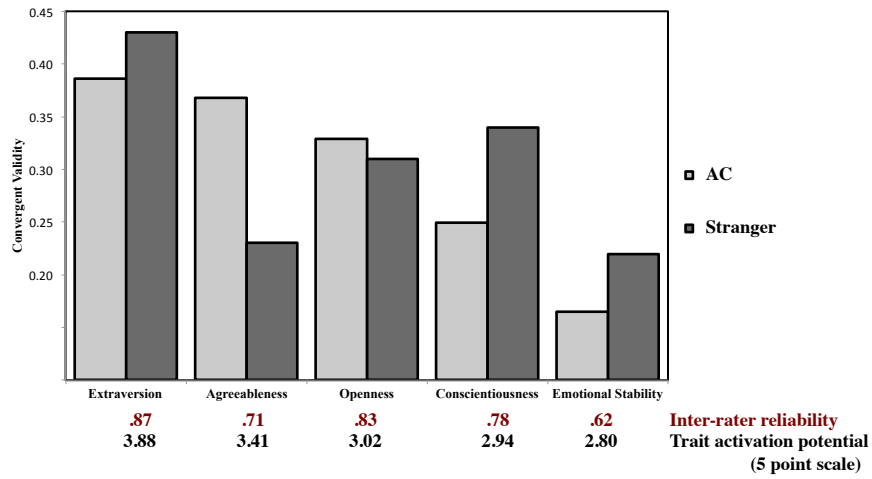
## Building Hybrid



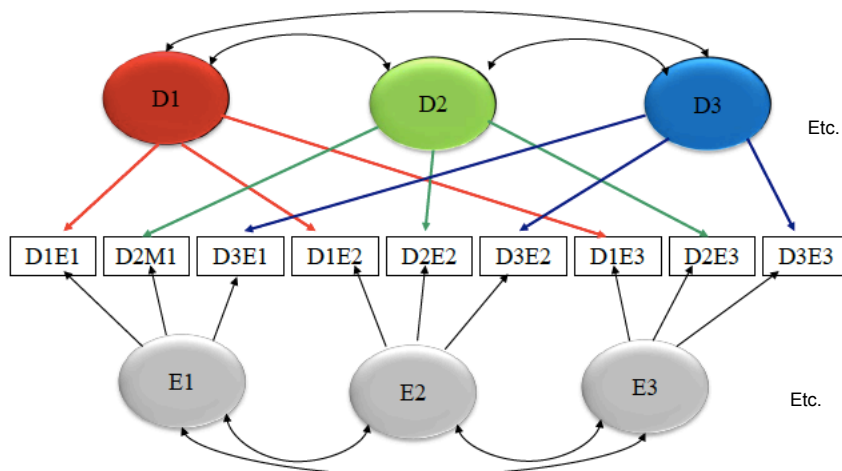
## Towards More Direct Evidence...

<b>Extraversion</b>	Not Ratable*	Not Characteristic	Very Characteristic
Exhibits high enthusiasm & energy	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
Talkative	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
...	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
<b>Agreeableness</b>	Not Ratable*	Not Characteristic	Very Characteristic
Expresses agreement or support	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
Supports others' decisions	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
...	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
<b>Conscientiousness</b>	Not Ratable*	Not at All Characteristic	Very Characteristic
Emphasizes goals & accomplishments	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
Prioritizes or plans activities	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
...	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
<b>Neuroticism</b>	Not Ratable*	Not Characteristic	Very Characteristic
Seeks reassurance from others	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
Acts irritated or annoyed	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
...	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
<b>Openness</b>	Not Ratable*	Not Characteristic	Very Characteristic
Integrates others ideas & suggestions	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
Contributes new & creative ideas	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3
...	<input type="checkbox"/> NR	<input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 3

## Direct Evidence (Christiansen et al., 2014)



## Underlying Structure: AC With Big Five



## Conclusions

Promising initial evidence for directly assessing Big 5 in AC exercises

Key outstanding issues

- Criterion-related validity
- Feedback (reactions)



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## 3. Speed Assessment

Journal of Applied Psychology

© 2014 American Psychological Association  
0021-9010/14/\$12.00 http://dx.doi.org/10.1037/ap0000044

The Interplay of Elicitation and Evaluation of Trait-Expressive Behavior:  
Evidence in Assessment Center Exercises

Filip Lievens  
Ghent University

Eveline Schollaert  
University College Ghent

Gert Keen  
D'FBO. ●●●



## Typical AC Matrix

Exercises	Dimensions			
	Sensitivity	Communication	Planning	Stress Resilience
Case			x	
Discussion	x	x		
In-basket			x	(x)
Presentation	x	x	(x)	x
Role-play	x	x	(x)	

## OSCE



## Alternative AC matrix

Sensitivity			Planning			Stress Resilience		
x	x	x						
x	x	x						
			x	x	x			
			x	x	x			
						x	x	x
						x	x	x

## The Idea

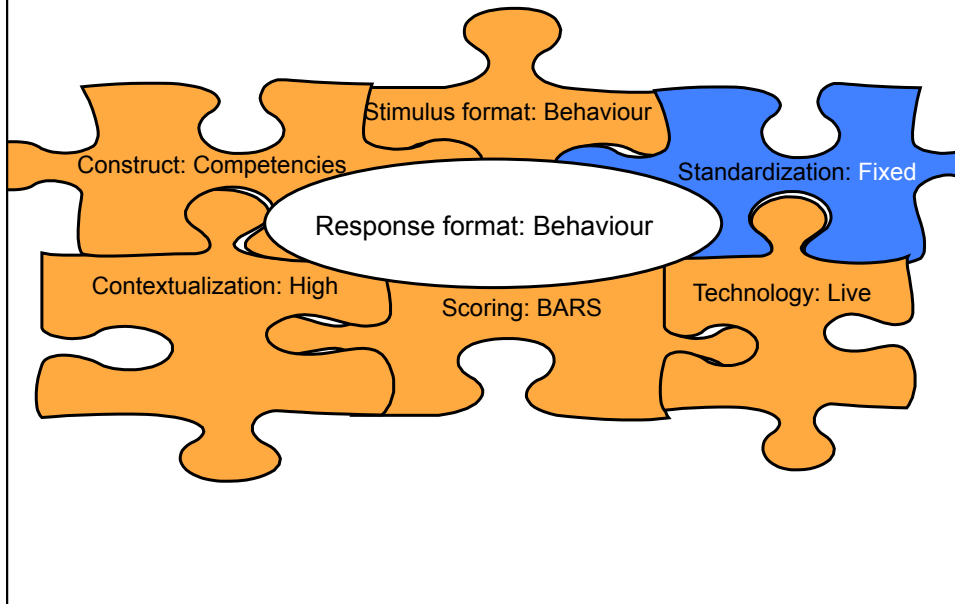
### ACs

- Limited sample of situations
- Multiple competencies per exercise
- Emphasis on (non)-verbal behaviour

### Structured interviews

- Broader coverage of situations
- One competency per question
- Intentions/ experience instead of behavior

## Building Hybrid



## Speed Assessment

Part of MBA entry procedure

In-basket: Starting point

Followed by 18 mini role-plays

- 3 minutes at most
- 1 competency (3 prompts)
- Role-player = assessor

## Initial Evidence

Favourable applicant perceptions

Reliable measurement of dimensions

Focused measurement of dimensions

Insights into people's **agility & adaptability**



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## Epilogue

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## Epilogue

Assessment centres always had a history of experimentation.

Break selection procedures down in smaller key components.

Develop new & innovative procedures by **creatively** mixing & modifying components.

› End user – AC designer – AC firm

Make good tools even better!

## Epilogue

*“Discovery consists of looking at the same thing as everyone else and thinking something different.”*

**Albert Szent-Györgyi**  
Nobel Prize in Medicine (1938)



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# Thanks for your attention!

More info on  
<http://users.ugent.be/~flievens>

