
GAME-BASED ASSESSMENTS





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Evolution of the Assessment Industry

**Pen and paper
assessments**

**Computer based
assessments**

**Gamified
assessment**

Digital traces

**Online / Remote
assessments**

**Behavioural
encoding**

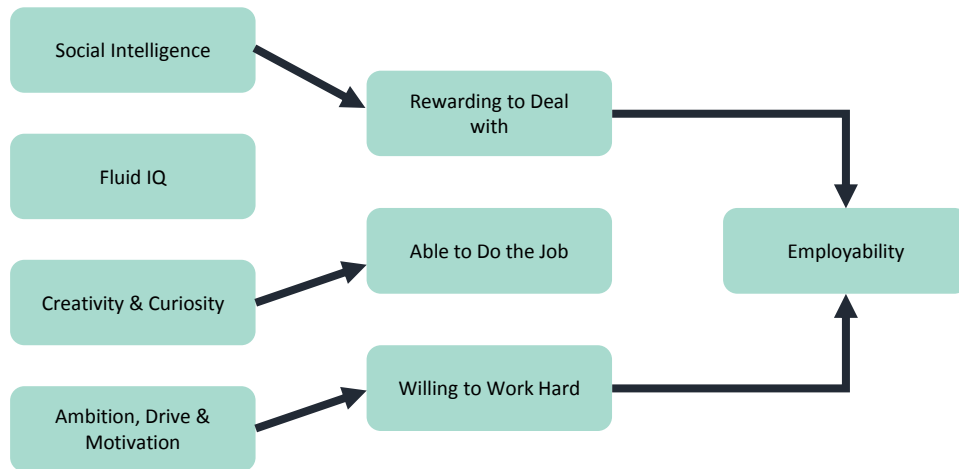


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THE PERFECT EMPLOYEE

(TRAITS)

Finding the best applicant, for any job



Based on Employability and Career Success: Bridging the Gap Between Theory and Reality, R. Hogan, T. Chamorro-Premuzic, and R.B. Kaiser, 2013.

Requires valid psychometric tools

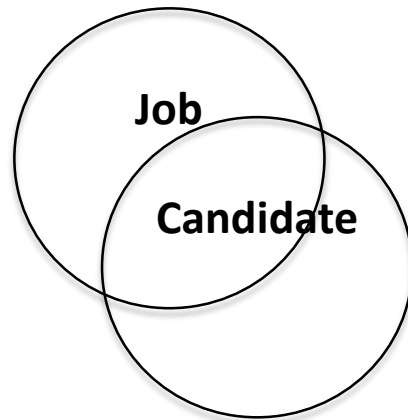


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... FOR THE JOB (PERFORMANCE)

Finding the best applicant for the job

Matching / Predictive hiring



Requires data on characteristics of existing employees in the same role,

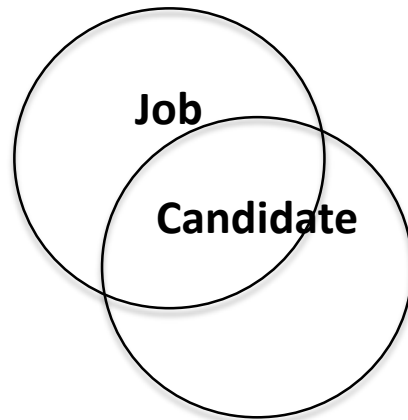
and their performance



... FOR THE JOB (PERFORMANCE)

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HOW SMART ARE YOU?

What follows in the sequence

10, 19, 29, 40, 52, ?

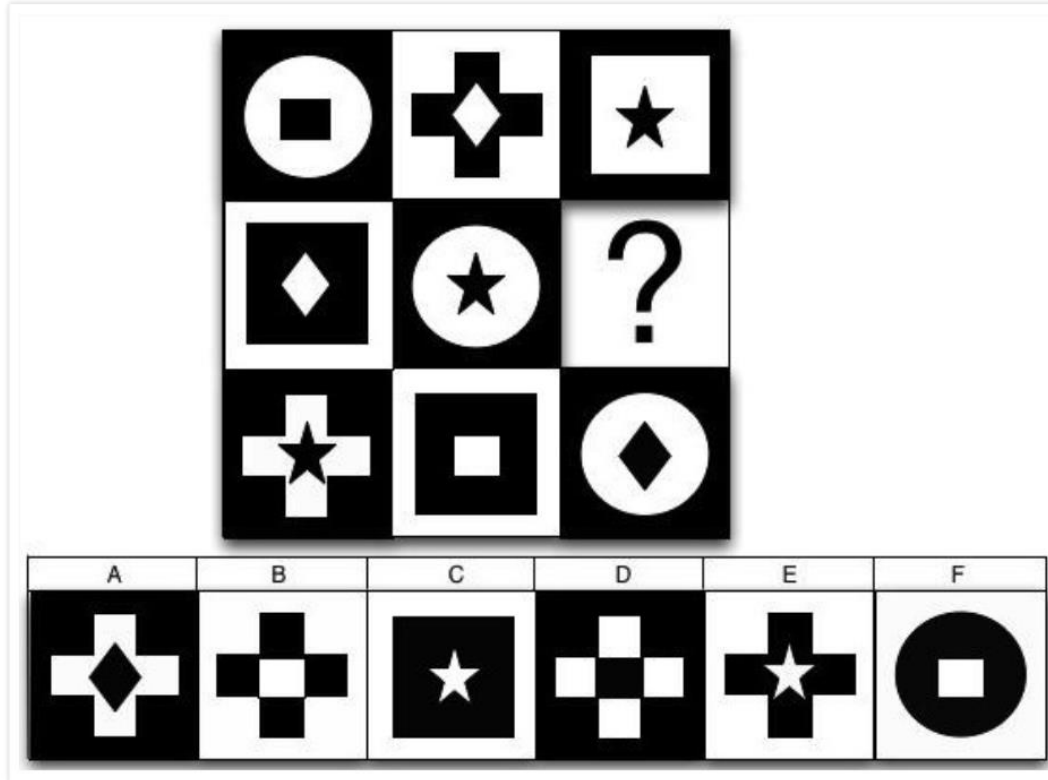
Your answer is



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HOW SMART ARE YOU?



COGNITIVE TESTS PUT PEOPLE ON THE SPOT

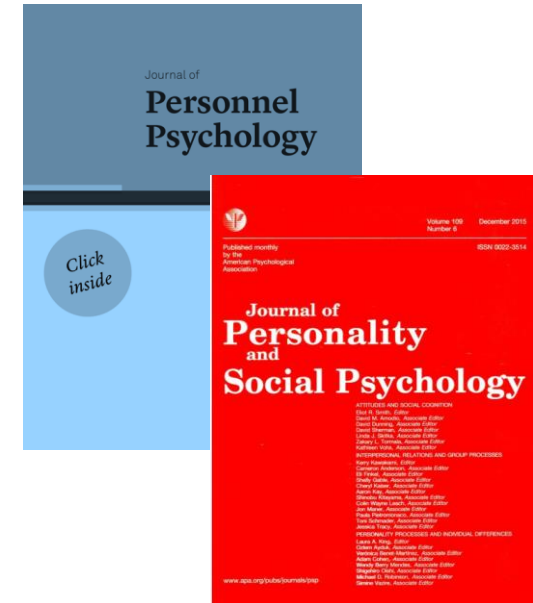


MOST CONSISTENT PREDICTOR OF JOB PERFORMANCE

	Supervisor-rated performance	Extrinsic career success
Cognitive ability	.42 – .57**	.53**
Extraversion	-.08 – .14	.19*
Agreeableness	.07 – .09	-.11
Conscientiousness	.08 – .23*	.50**
Emotional stability	.01 – .06	-.34**
Openness to experience	.03 – .13	.14

Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel psychology*, 52(3), 621-652.

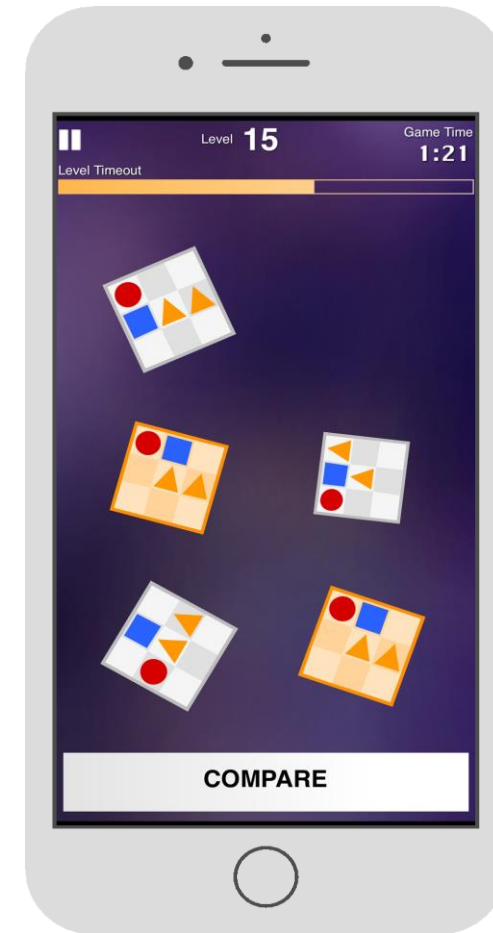
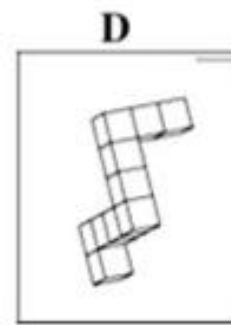
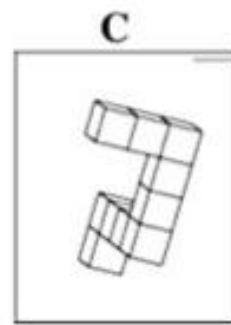
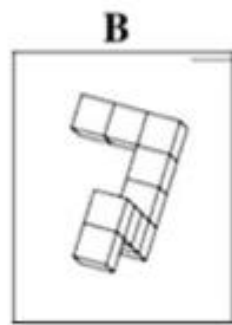
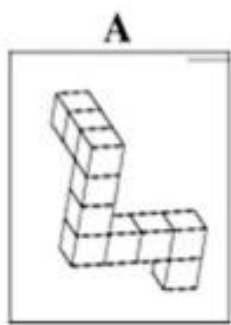
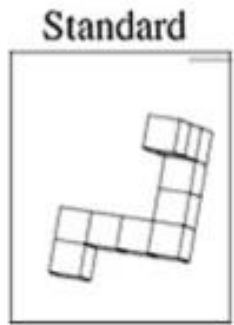
Higgins, D. M., Peterson, J. B., Pihl, R. O., & Lee, A. G. (2007). Prefrontal cognitive ability, intelligence, Big Five personality, and the prediction of advanced academic and workplace performance. *Journal of Personality and Social Psychology*, 93(2), 298.



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GAMIFIABLE



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GAMES MEASURE COGNITIVE ABILITY

Extract
Gameplay
Behavior



Combine into
Assessment

**COGNITION
COMPREHENSIVE**

14 mins

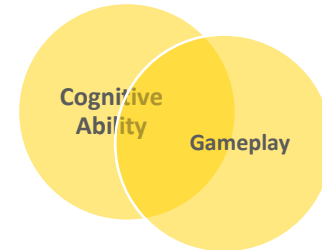
4 Games
A detailed, validated
measure of general
cognitive ability.

Machine
Learning Based
Scoring Model

Testing 12
prediction
models using
nested cross
validation

Concurrent
Validity

**.70
correlation**



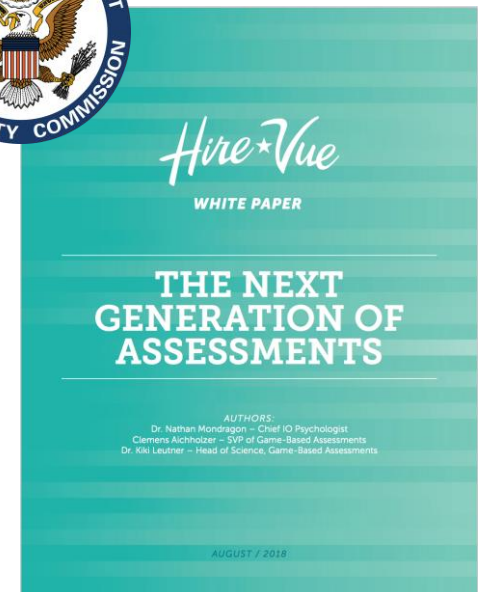
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DIVERSITY AND ADVERSE IMPACT



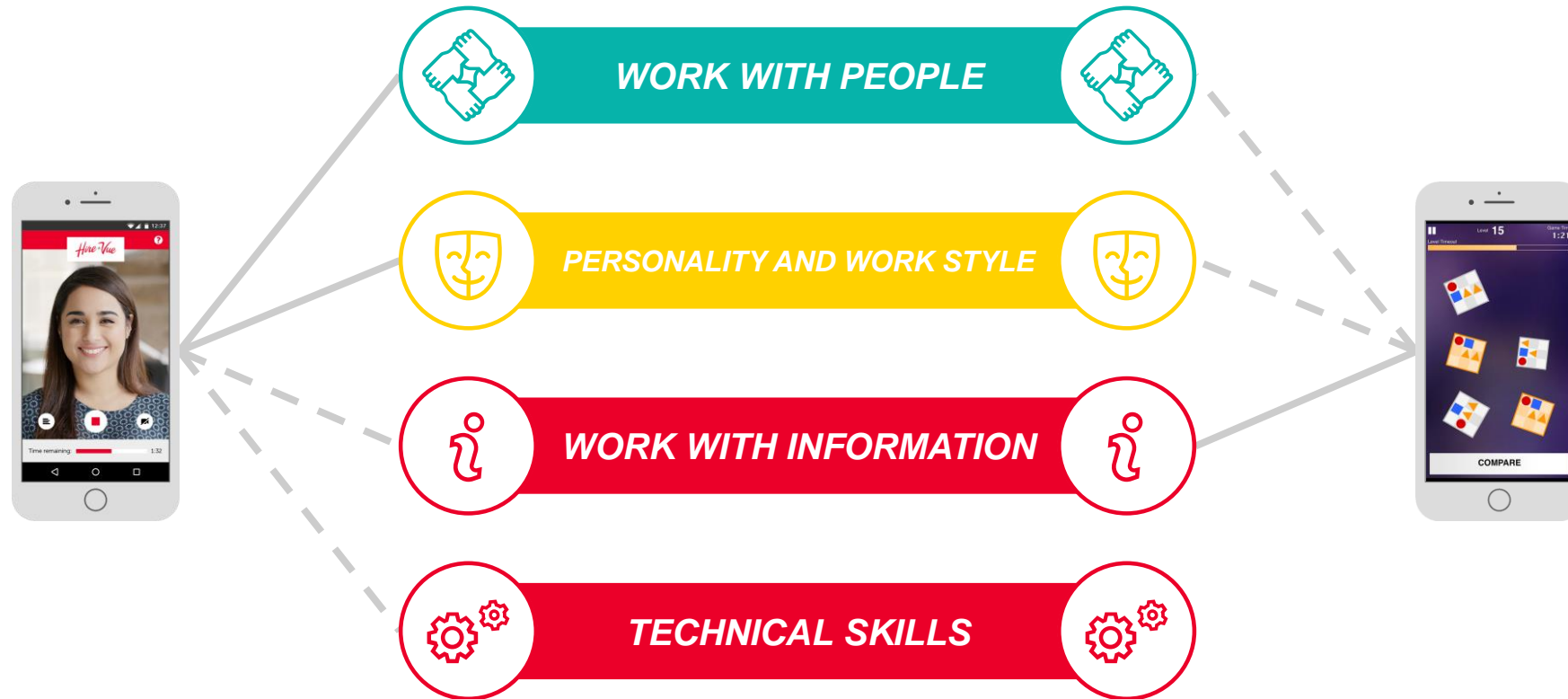
UNIFORM GUIDELINES FOR EMPLOYEE SELECTION



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DOES IT WORK FOR OTHER TRAITS?



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HOW TO CHECK AN ASSESSMENT WILL WORK

Is the assessment modality right for your:

Brand: look and feel represents your brand, does it compare well to others in your industry?

Applicants: shorter testing times, enjoyable experience, feels like they are valued?

Is the assessment model realistic for your application (trait vs performance model)?

Performance model:

Are you happy with your current work force?

Do you have 1,000, ideally 10,000s in the job role?

Do you have robust performance data?

If no to any of those, use a trait model

Is the assessment ethical

Will it be accepted in the countries you will use it in?

Can you trust the assessment is fair?

Were diverse samples used to train AI algorithms

Are large samples available to show no adverse impact (100s of people per minority group)

Is the assessment valid

Does it measure what it says it does: Does the provider show correlations with existing measures of personality/IQ (trait models) or job performance (performance models)?

Does the provider show their assessment correlates with being hired and / or job performance in client projects?

Any peer reviewed publications?

PhD level IO Psychologists involved in development? Can you speak to them directly to answer questions?



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IDENTIFYING THE BEST PROVIDER

Area	Provider 1	Provider 2
Validity (correlations with existing measures)		
Validity (correlations with job performance)		
Adverse Impact (tested in large sample)		
Adverse Impact (diverse training sample)		
Inclusion (provisions for disabilities)		
Peer reviewed publications		
IO Psych team		
Manager reports		
Feedback to candidates		
User experience		
User experience studies		



Thank

you!

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