Construct overlap in traits measures and the general factor of personality

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Konstadinos Petrides

Dimitri van der Linden

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Constructs and traits measures in Psychology

- Psychology has a tremendous amount of trait (and state) measures

Grit
Big Five
Resilience
Need for cognition
Flow proneness
Creativity
Dark triad
Self-esteem
Ability to identify criteria
Emotional intelligence
Impulsivity
Psychopathy
Empathy
Self-control
Social skills
Well-being
Sociosexual orientation
Aggression
Mindfulness
Etc. etc.
….

And humans are indeed complex, But….

Trait/measures overlap

AMERICAN PSYCHOLOGICAL ASSOCIATION

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Evaluating the Big Five as an Organizing Framework for Commonly Used Psychological Trait Scales

Timothy F. Bainbridge[1], Steven G. Ludeke[2], and Luke D. Smillie[1]
[1] School of Psychological Sciences, The University of Melbourne
[2] Department of Psychology, University of Southern Denmark

Figure 1
The General Form of the Exploratory Structural Equation Models

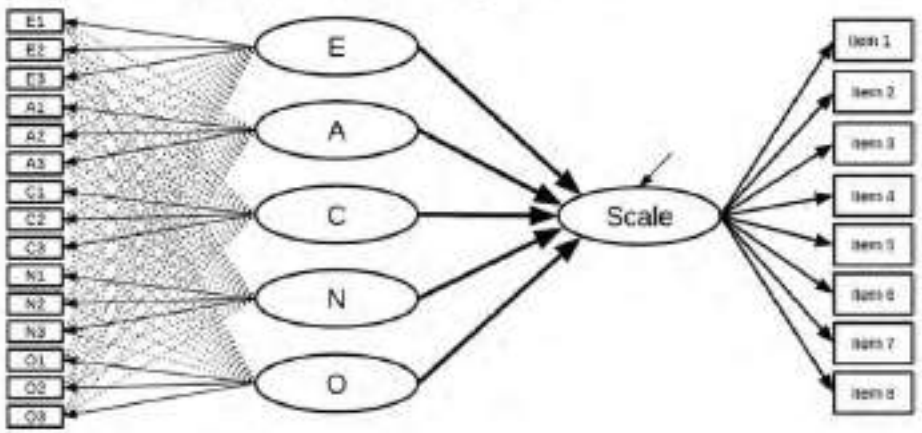
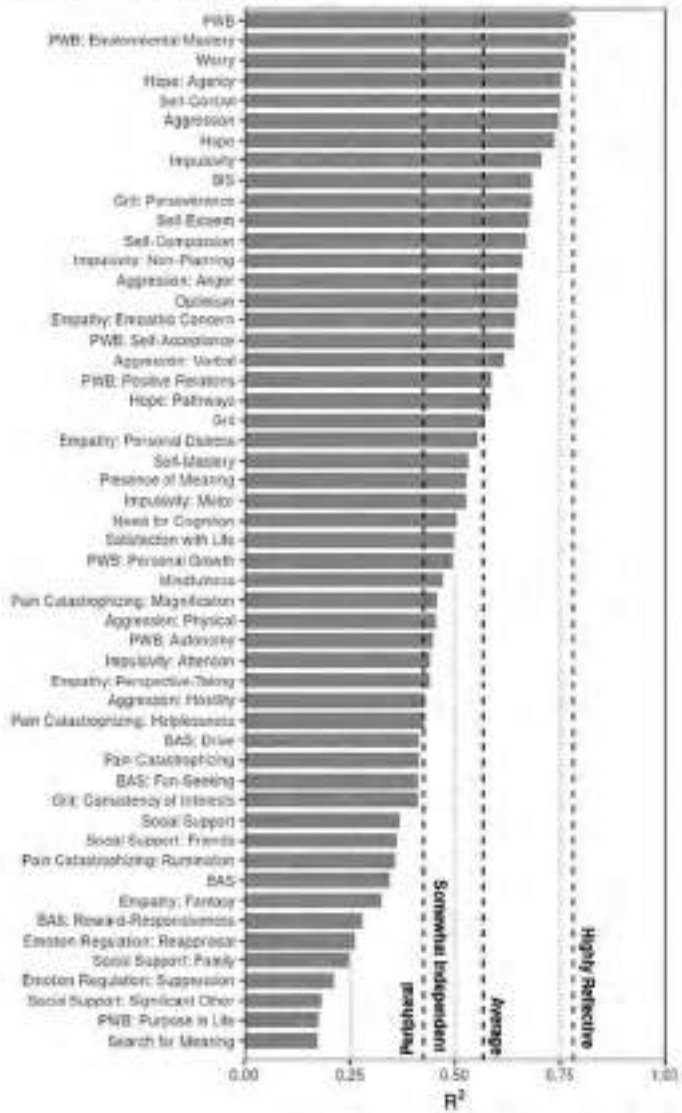
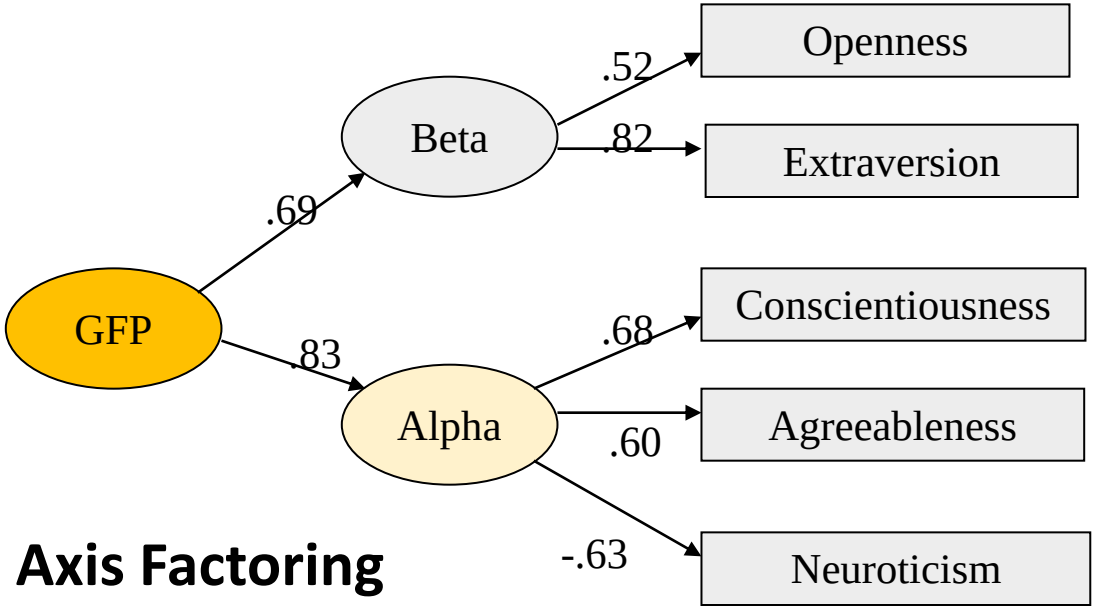


Figure 3
Meta-Analytic R^2 Values in Study 2



General Factor of Personality



	ρ
O-C	.20
O-E	.43
O-A	.21
O-N	-.17
C-E	.29
C-A	.43
C-N	-.43
E-A	.26
E-N	-.36
A-N	-.36

(Meta-analytic values; Van der Linden et al., 2010)

Principal Axis Factoring

B5	Factor Loadings
Openness	.42
Conscientiousness	.63
Extraversion	.57
Agreeableness	.57
Neuroticism	-.62

Also in other personality models, e.g.,:

Eysenck's PEN-model

CPI

Project Talent Personality Inventory

General Factor of Personality

Ongoing debate but…..

….For now, just leave that

Social desirability bias

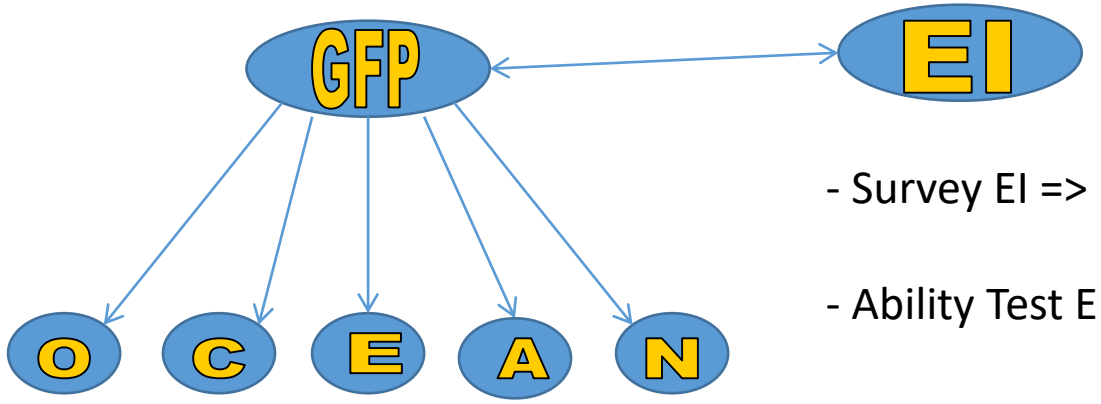
Social effectiveness

It’s not there!

Not consistent - invariance

Trait overlap
GFP and Emotional Intelligence

Meta-analysis: more than 100 studies



- Survey EI => **r = .88**!!

- Ability Test EI => r = .28

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2017, Vol. 143, No. 1, 36–52

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Overlap Between the General Factor of Personality and Emotional Intelligence: A Meta-Analysis

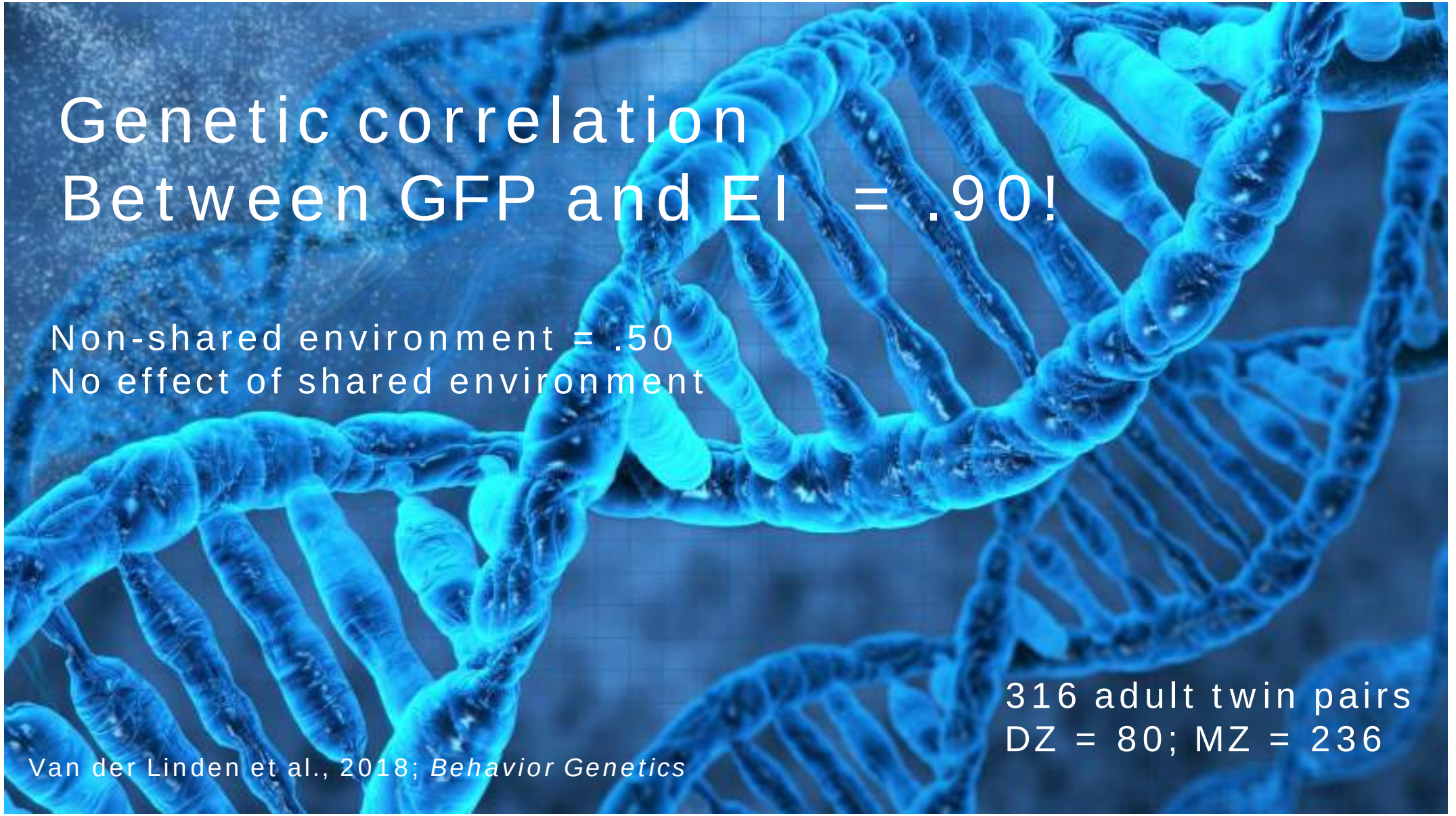
Dimitri van der Linden, Keri A. Pekaar, and Arnold B. Bakker
Erasmus University Rotterdam

Julie Aitken Schermer and Philip A. Vernon
University of Western Ontario

Curtis S. Dunkel
Western Illinois University

K. V. Petrides
University College London

GFP and Emotional Intelligence



Trait overlap

ORIGINAL RESEARCH article

Front. Psychol., 22 November 2021
Sec. Personality and Social Psychology
Volume 12 - 2021 | https://doi.org/10.3389/fpsyg.2021.741462

The General Factor of Personality as Ego-Resiliency

Curtis S. Dunkel[1] Dimitri van der Linden[2*†] Tetsuya Kawamoto[3] Atsushi Oshio[4]

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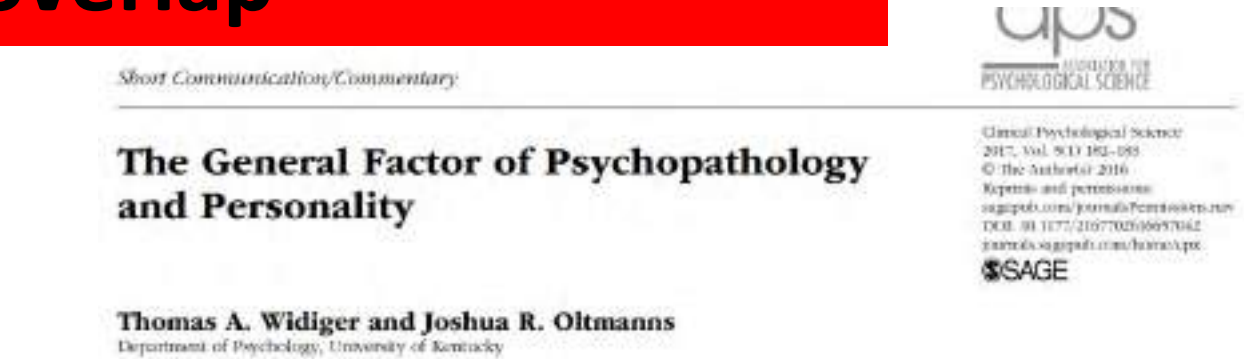
[3] Faculty of Letters, Kokushikan University, Tokyo, Japan
[4] Faculty of Letters, Arts and Sciences, Waseda University, Tokyo, Japan

***r* = 0.85!**

FFM	*K*	*N*	Observed (mean) Correlation	ρ
Openness	7	4090	0.46	0.50
Conscientiousness	7	4090	0.42	0.45
Extraversion	9	4732	0.44	0.47
Agreeableness	7	4090	0.39	0.42
Neuroticism	9	4732	−0.56	−0.63

Trait overlap

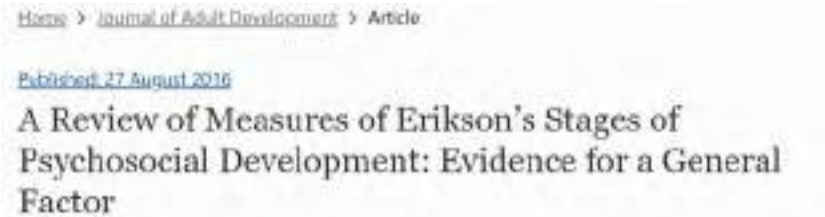
r	Trait
-.063	Dark Triad (core)
0.68	Erikson Developmental stages (core)
0.87	Character (e.g., grit, perseverance)
0.80	Flow proneness
-0.70	*P* factor Psychopathology


Short Communication/Commentary

The General Factor of Psychopathology and Personality

Thomas A. Widiger and Joshua R. Oltmanns
Department of Psychology, University of Kentucky

SAGE


Home › Journal of Adult Development › Article

Published: 27 August 2016

A Review of Measures of Erikson's Stages of Psychosocial Development: Evidence for a General Factor

Curtis S. Dunkel & Colin Harbke

The Journal of Genetic Psychology

The General Factor of Personality and Character: A Reanalysis

Personality and Individual Differences

The General Factor of Personality: The relationship between the Big One and the Dark Triad

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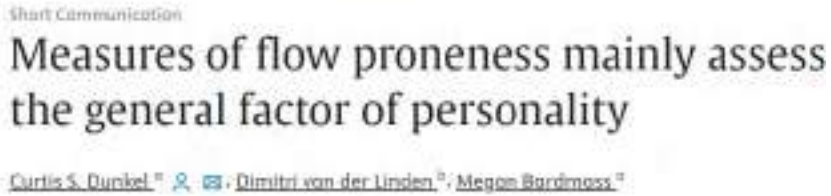
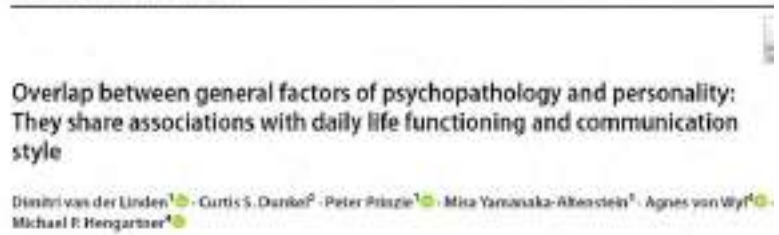
Personality and Indivi

Volume 196, October


Short Communication

Measures of flow proneness mainly assess the general factor of personality

Curtis S. Dunkel, Dimitri van der Linden, Megan Bardmass

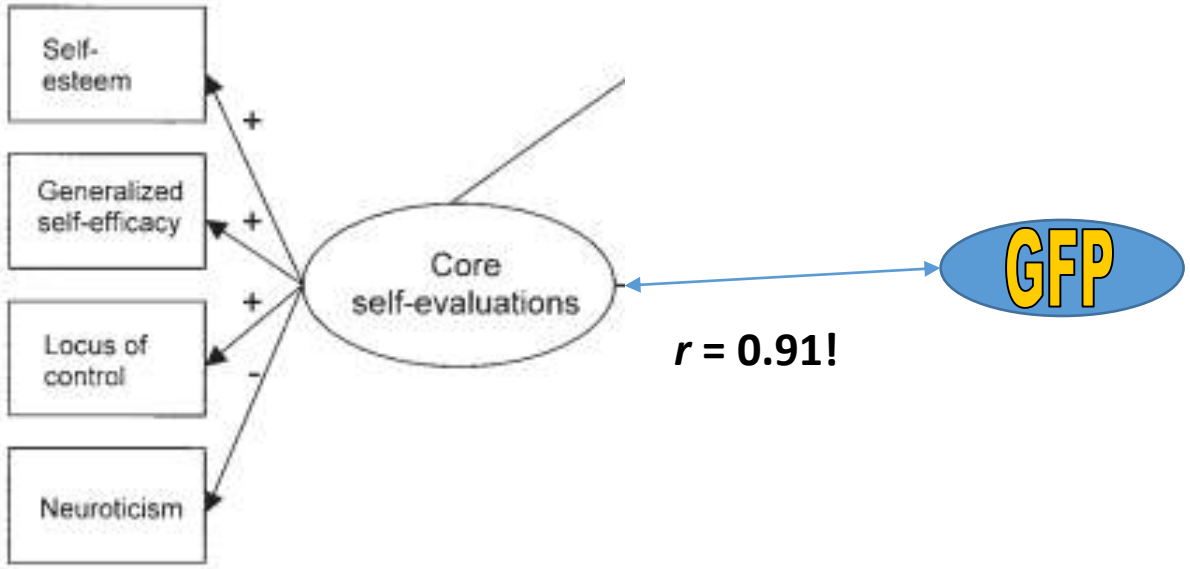

Overlap between general factors of psychopathology and personality: They share associations with daily life functioning and communication style

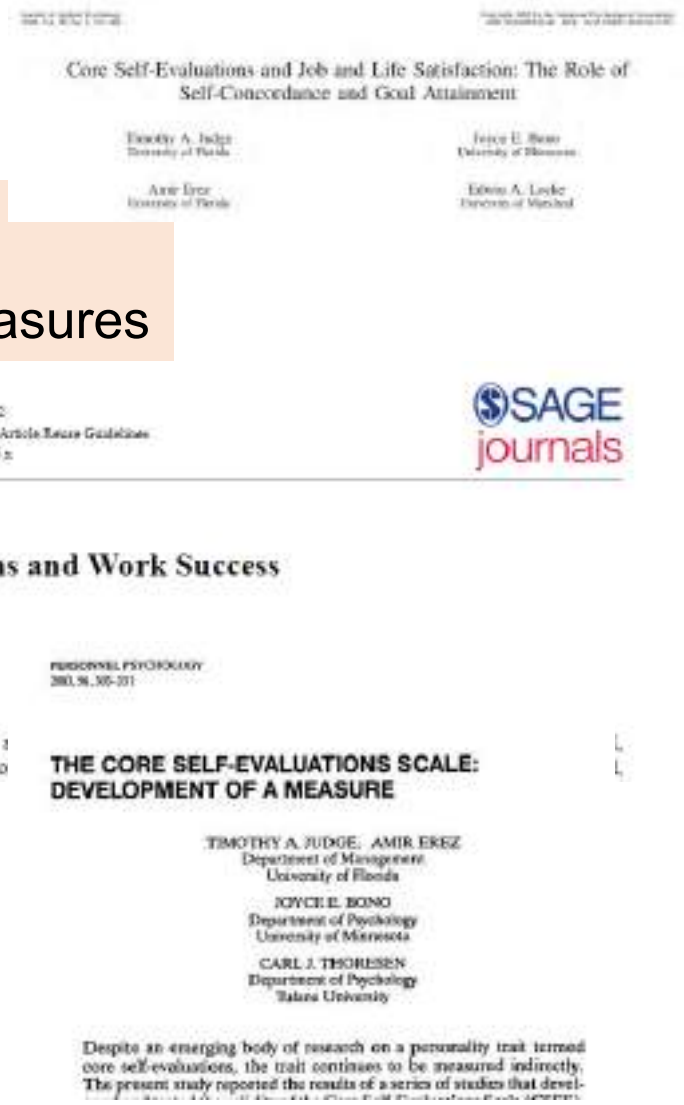
Dimitri van der Linden · Curtis S. Dunkel · Peter Prinzie · Mira Yamasaka-Akenstein · Agnes von Wyl · Michael P. Hengartner

Trait overlap

New research:

Core self evaluations → General factor in self-esteem/self-reliance measures





Core Self-Evaluations and Job and Life Satisfaction: The Role of Self-Concordance and Goal Attainment

Timothy A. Judge — Joyce E. Bono — Amir Erez — Edwin A. Locke

Current Directions in Psychological Science

SAGE journals

Article

Core Self-Evaluations and Work Success

Timothy A. Judge

Abstract

Core self-evaluations (CSE) is … generalized self-efficacy, and (Jo…

PERSONNEL PSYCHOLOGY

THE CORE SELF-EVALUATIONS SCALE: DEVELOPMENT OF A MEASURE

TIMOTHY A. JUDGE, AMIR EREZ
Department of Management
University of Florida

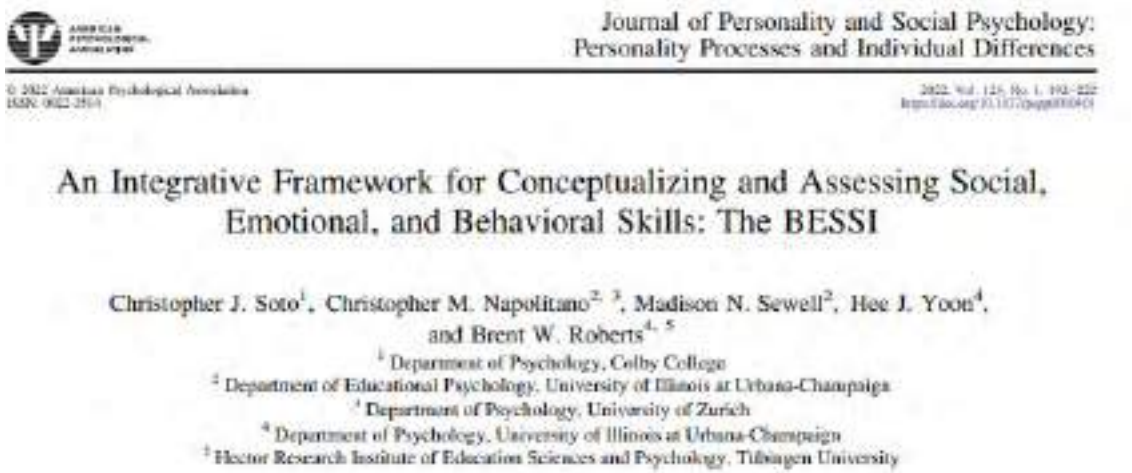
JOYCE E. BONO
Department of Psychology
University of Minnesota

CARL J. THORESEN
Department of Psychology
Tulane University

Despite an emerging body of research on a personality trait termed core self-evaluations, the trait continues to be measured indirectly. The present study reported the results of a series of studies that devel-

From: Judge et al., 2005; JAP

Trait overlap



Journal of Personality and Social Psychology:
Personality Processes and Individual Differences

An Integrative Framework for Conceptualizing and Assessing Social, Emotional, and Behavioral Skills: The BESSI

Christopher J. Soto[1], Christopher M. Napolitano[2, 3], Madison N. Sewell[2], Hee J. Yoon[4], and Brent W. Roberts[4, 5]

[1] Department of Psychology, Colby College
[2] Department of Educational Psychology, University of Illinois at Urbana-Champaign
[3] Department of Psychology, University of Zurich
[4] Department of Psychology, University of Illinois at Urbana-Champaign
[5] Hector Research Institute of Education Sciences and Psychology, Tübingen University

Current Directions in Psychological Science

JOURNAL HOMEPAGE

Taking Skills Seriously: Toward an Integrative Model and Agenda for Social, Emotional, and Behavioral Skills

Social, Emotional, and Behavioral (SEB) skills: a person's capacities to maintain social relationships, regulate emotions, and manage goal- and learning-directed behaviors.

Soto et al. 2020

***r* = 0.91!**

In this article, we propose an integrative model that defines SEB skills as capacities (what someone is capable of doing) rather than personality traits (what someone tends to do) and identifies five major skill domains: social engagement, cooperation, self-management, emotional resilience, and innovation.

What is the core?

Social desirability bias

Social effectiveness

It's not there!

(No longer seems an argument)

Not consistent - invariance

Emotional or social intelligence

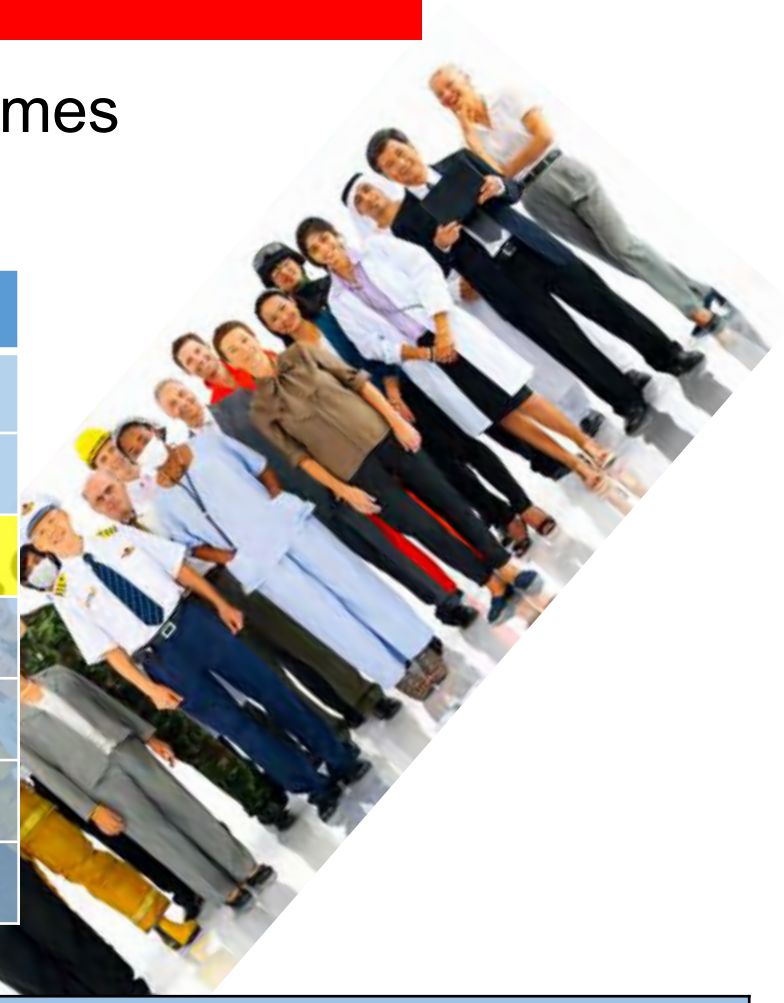
Ego-resilience

Implications?

The core is the ‘active part’? - Predicts outcomes

GFP (Step 1) and Unique Big Five (Step 2) on job performance

	Step 1		Step 2		
	R^2_{GFP}		$R^2_{GFP+\ Unique\ B5}$		ΔR^2
Performance criteria					
Overall job performance	**.078**		.102		**.024**
Supervisor rated performance	.090		.129		.039
Objective performance	.063		.084		.022
Team performance	.176		.199		.023
Training performance	.144		.226		.082



Based on Meta-Analytic data (Pelt et al., 2017)

	O	C	E	A	ES	Stability	Plasticity
Overall job performance	**-.05 (.07)**	**.12 (.27)**	**-.01 (.15)**	**-.04 (.13)**	**-.06 (.13)**	**.06 (.30)**	**-.05 (.16)**

Implications?

- Bias? => Then control for it?

What will be left?

- Substantial? => How to explain/approach

Better understanding Psych Measures

- We can't just ignore it

- Endlessly tapping the same variance

- Having similar discussions/tests infinitely

e.g., SEB

Contact:
vanderlinden@essb.eur.nl

Trait overlap

Personality and Individual Differences
Volume 40, Issue 3, February 2006, Pages 521-532

Burnout and work engagement: Do individual differences make a difference?

Saar Langelaan, Arnold B. Bakker, Lorenz J.P. van Doornen, Wilmar B. Schaufeli

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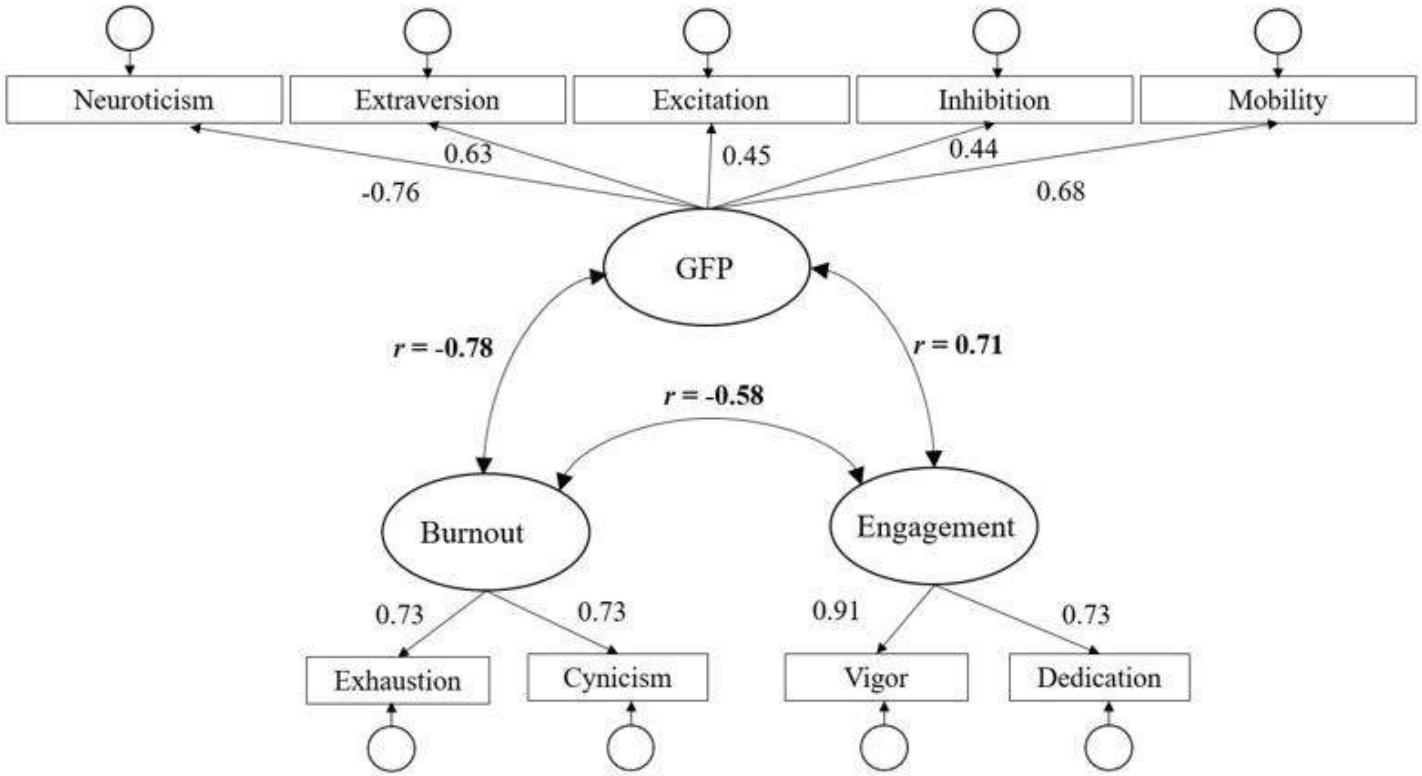
https://doi.org/10.1016/j.paid.2005.07.009



1) N, Extr => NEO-FFI
2) E, I, M => Pavlov Temperament survey

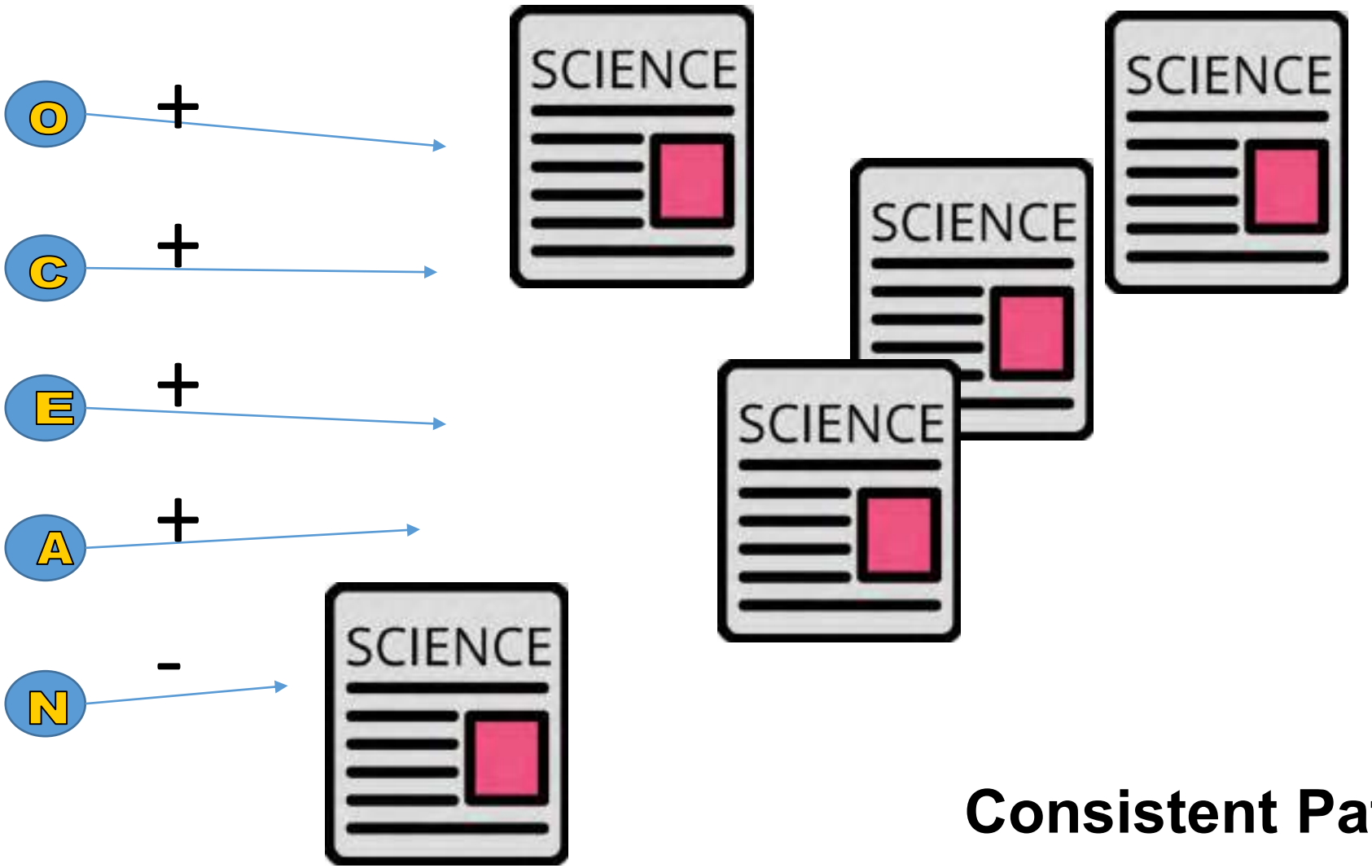
Trait non-overlap

r	Trait
M = 0.09 (0.03 – 0.16)	Moral Foundations
0.15	Vocational interests GF
0.16	Risk taking

Moral Foundations
1) Care/Harm,
2) Fairness/Cheating,
3) Loyalty/Betrayal,
4) Authority/Subversion,
5) Sanctity/Degradation
6) Liberty/Oppression

Seem mainly attitudes/interests

Big Five meta-analyses in literature



Consistent Pattern?