

**DEVELOPMENT AND USE OF
PERSONALITY TESTS
IN PERSONNEL SELECTION**

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- History of personality testing
 - As cognitive tests, first published tests appeared in the early 20th century
 - But unlike cognitive tests, difficulties from the start
 - Definition of personality
 - Use for psychodiagnosis
 - “Lexical” (language-based) approach
 - 17,953 words identified as used to describe people
 - 4,504 trait descriptors
 - originally reduced to 35 factors
 - much factor analytic work ensued
 - Thus began a tradition of multi-scale personality tests
 - MMPI (Minnesota Multiphasic Personality Inventory)
 - [intended for diagnosis of psychopathology]
 - CPI (California Psychological Inventory)
 - 16 PF (16 Personality Factor)
 - Guilford-Zimmerman Temperament Survey
 - Eysenck Personality Inventory
 - Edwards Personal Preference Schedule
 - Personnel Research Form
 - Gordon Personal Profile/Inventory
 - NEO (Neuroticism-Extraversion-Openness)
 - HPI (Hogan Personality Inventory)
 - Continuation of factor analytic work= “Five Factor Model”
 - [labels vary]
 - Conscientiousness
 - Emotional Stability
 - Agreeableness
 - Extraversion
 - Openness to Experience

- Integrity tests
 - Developed as substitute for polygraph examination
 - Overt vs. personality-based
 - Meta-analysis indicates high level of validity (Ones, et.al., 1993)
 - Job performance
 - Counterproductive work behavior
 - “Construct deconstruction” of integrity tests (Ones, 1993)
 - Conscientiousness
 - Emotional Stability
 - Agreeableness

- Criterion-oriented predictor scales (COPS)
 - Empirically developed scales for prediction of specific criteria
 - Examples: Customer Service; Stress Tolerance
 - Measure Conscientiousness; Emotional Stability; Agreeableness in varying degrees

- Other developments in I/O psychology
 - Personality test validation research
 - Lower, but consistent, levels of validity
 - Validity is incremental to cognitive tests
 - Minimal or no adverse impact

 - “Extra-task performance” (not only job performance)
 - Organizational citizenship behavior (OCB)
 - Counterproductive work behavior (CWB)

- Alternatives to Test Development Research

- Purchase existing test
- Use International Personality Item Pool (website: ipip.ori.org)
(see next page)

- Test Development Research

Tests—Developed

- ¹Personal Characteristics Inventory
 - Conscientiousness
 - Emotionality
 - Agreeableness

- ²Overt Integrity

¹ 80 items drafted for each scale, reduced to 50 items per scale based on ratings by 6 Personnel Department executives, 3 clinical psychologists, and 3 I/O psychologists.

Subsequent to administration and scoring, retention or deletion of each item determined based on item analyses, demographic subgroup differences in response, and item content, resulting in 27, 22, and 23 items, respectively.

² 68 items; subsequent to administration and scoring, retention or deletion of each item determined based on item analyses, demographic subgroup differences in response, and item content, resulting in 29 items.

Test—Established

- Hogan Personality Inventory
 - Prudence
 - Adjustment
 - Likeability
- Reliability
- Customer Service

Criteria

Polygraph Examination
Background Investigation
Appointment

Research Participants

860 candidates for Law Enforcement Officer
744 candidates completed all tests

International Personality Item Pool: A Scientific Collaboratory* for the Development of Advanced Measures of Personality and Other Individual Differences

~ Mission Statement ~

This IPIP Website is intended to provide rapid access to measures of individual differences, all in the public domain, to be developed conjointly among scientists worldwide. Later, the site may include raw data available for reanalysis; in addition, it should serve as a forum for the dissemination of psychometric ideas and research findings.

*What is a *collaboratory*?

"A collaboratory is a computer-supported system that allows scientists to work with each other, facilities, and data bases without regard to geographical location."

(Finholt, T. A., & Olson, G. M. From laboratories to collaboratories: A new organizational form for scientific collaboration. *Psychological Science*, January 1997; vol. 8, no. 1; pp. 28-36.)

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Table 1

**MEANS AND STANDARD DEVIATIONS OF REVISED RESEARCH TEST
AND SCALE SCORES BY RACE/ETHNICITY AND GENDER**

	Personality		Conscien		Emotion		Agreeable		Overt	
Race/Ethnicity	M	SD	M	SD	M	SD	M	SD	M	SD
Black	77	9.6	75	12.9	79	10.3	78	10.2	73	12.1
Hispanic	77	8.5	76	12.5	80	15.4	77	9.1	74	13.6
Asian	78	8.9	75	11.7	80	14.9	78	10.3	72	12.7
Caucasian	78	9.5	74	13.5	81	15.8	78	10.2	73	13.3
Gender										
Male	78	9.0	75	12.7	80	15.6	78	9.7	73	13.6
Female	77	9.1	74	13.4	79	15.4	79	9.8	76	11.3
TOTAL	77	9.0	75	12.8	80	15.6	78	9.7	73	13.3

Table 2

**CORRELATIONS OF REVISED RESEARCH TEST AND SCALE SCORES
WITH SELECTED HOGAN PERSONALITY INVENTORY SCALE SCORES**

	Personality	Conscien	Emotion	Agreeable	Overt
Combined	.71	.43	.70	.33	.57
Prudence	.67	.52	.59	.25	.55
Adjustment	.58	.26	.67	.28	.51
Likeability	.39	.24	.29	.32	.17
Reliability	.54	.32	.58	.19	.50
Customer Service	.43	.29	.35	.24	.27

Note: Correlations of .15 and higher $p < .0001$; correlations of .07 and higher $p < .05$.

Table 3

**CORRELATIONS OF REVISED RESEARCH TEST AND SCALE SCORES
WITH OUTCOME MEASURES**

	Personality	Conscien	Emotion	Agreeable	Overt
Polygraph	.01	.05	-.06	.06	.05
Background	-.08	-.05	-.08	-.02	-.13**
Binary Bkgrnd	.20**	.12	.22***	.04	.23***
Appointment	.11**	.09*	.11**	.02	.15****

Note: Statistical significance of correlations vary due to differences in sample size.

Table 4

**CORRELATIONS OF SELECTED HOGAN PERSONALITY INVENTORY SCALE
SCORES WITH OUTCOME MEASURES**

	Combined	Prudence	Adjustment	Likeability	Reliability	Cus Ser
Polygraph	.03	.02	.04	.00	-.02	.04
Background	-.09*	-.08	-.11**	.05	-.06	-.05
Binary Bkgrnd	.20**	.19**	.20***	-.01	.17**	.10
Appointment	.14***	.10**	.14***	.06	.08*	.10**

Note: Statistical significance of correlations vary due to differences in sample size.

- Conclusions

- (1) New personality-based test comparable to established test
- (2) New overt test compares appropriately to both new and established personality-based tests
- (3) Personality-based and overt new tests correlate significantly with pass/fail background investigation
 - These results, in addition to published validity generalization results, indicate either test could be used in the examination for any class.

Use of both tests did not significantly improve prediction of background investigation outcome.

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