

Personnel Decisions: A Comparison between Human Capability and Cognitive Ability

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Abstract

This study explores how Jaques' construct of human capability, used by practitioners around the world for personnel decisions, fits within the nomological net of established I/O constructs, such as cognitive ability and personality. It appears that the constructs have moderate relationships; therefore, they could be used as complements.

Introduction

Jaques' method has not been integrated into I/O literature. Despite Jaques' past criticisms of other standardized assessment procedures, such as intelligence tests, very few studies have empirically compared Jaques' conceptualizations to other well-established constructs, such as cognitive ability and personality. Jaques' method for assessing human capability has been accepted without being questioned or compared to other developments. This research is of significance to both Jaques' supporters and other researchers in the I/O psychology field. It raises new questions regarding the basis for personnel decisions.

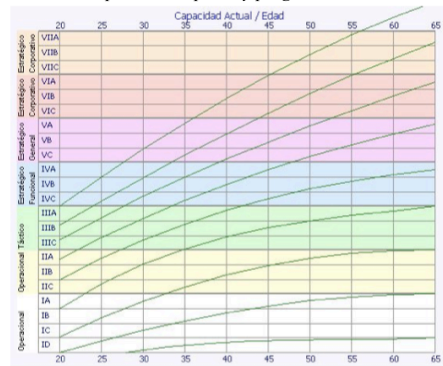
Different procedures have been developed to assess employees' abilities. Among the most widely used are interviews, standardized tests and inventories designed to assess human capability, cognitive ability, and personality (Jaques, 1994; Schmidt & Hunter, 1998).

Human capability: the amount of complexity an individual can handle when making a decision.

> Current potential capability (CPC): maximum level at which a person could currently work if he/she possessed the required skills, knowledge and motivation to perform that particular role.

> Future potential capability (FPC): predicted level of potential capability a person will possess at some specific time in the future as a result of a maturational process.

The potential capability progression bands



AMG Consulting Group - Adopted from Jaques (1996) p. 30

Hypotheses

- H1:** Human capability will be positively correlated to cognitive ability.
- H2:** Measures of CPC will be the human capability component most closely related to cognitive ability.
- H3:** Personality factors will influence interviewers' ratings of human capability.

Methods

Participants

- 125 employees from 5 different nationally top ranked companies, representing 7 job families: Director (4.8%); General Manager (17.6%); Area Manager (25.6%); Supervisor (29.6%); Professional Expert (8%); Analyst (11.2%); Assistant (1.6%) and other (1.6%).
- Participants from 25 to 57 years of age (mean = 35.7 and SD = 6.76).
- Argentinean population.

Procedure and measures

- *Human capability* was assessed during a semi-structured interview based on Jaques' (1994) methodology. The interview focused on analyzing two components of HC: current and future potential capability (CPC and FPC).
- *Cognitive ability* - 50 item Spanish version of the Wonderlic Personnel test.
- *Personality* - 163 item Spanish version of the 16 IPIP scales measuring constructs similar to those in Cattell's 16 PFQ. This measure is related to the Big 5 personality factors.

Results

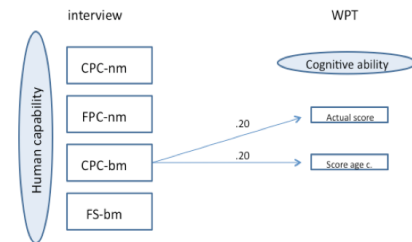
- *Cognitive ability* showed to be moderately related ($r = .20, p < .05$) to one of the components of HC (CPC).
- *Human capability* seems to be, at best, weakly related to personality factors as measured by the 16-IPIP scales:
 - > When analyzing the Big Five factors, openness to experience showed a significant positive correlation with the narrow ratings of both components of human capability [CPC ($r = .20$) and FPC ($r = .21$)].
 - > When analyzing the 16 personality traits, only one (assertiveness) indicated a positive significant correlation with CPC ($r = .24$).

Descriptive statistics and Correlations between Human Capability, Cognitive Ability, and the Big Five personality factors

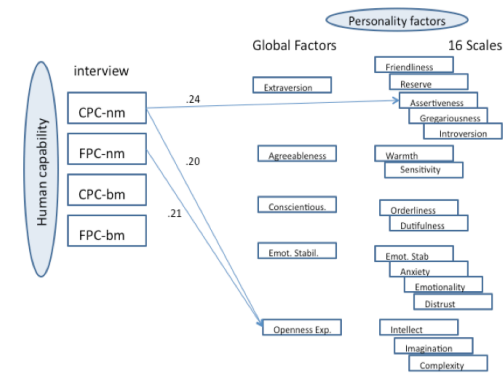
| Measure | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------------|-------|-------|-------|-------|-------|------|-------|------|-------|-------|-------|------|------|
| 1.CPC-nm | 6.46 | 1.004 | (-) | | | | | | | | | | |
| 2.FPC-nm | 9.34 | 1.756 | .41** | (-) | | | | | | | | | |
| 3.CPC-bm | 2.43 | 0.497 | .82** | .40** | (-) | | | | | | | | |
| 4.FPC-bm | 3.37 | 0.642 | .36** | .88** | .34** | (-) | | | | | | | |
| 5.WPT-as | 22.27 | 5.396 | 0.12 | 0.13 | .20* | 0 | (-) | | | | | | |
| 6.WPT-ac | 23.46 | 5.551 | 0.14 | 0.03 | .20* | -0.1 | .97** | (-) | | | | | |
| 7.BF1-Ex. | 3.422 | 0.33 | 0.18 | 0.1 | 0.11 | 0 | -0.1 | -0.1 | -0.7 | | | | |
| 8.BF2-Ag. | 3.755 | 0.349 | 0.06 | 0.06 | 0 | 0 | 0.01 | 0 | .51** | -0.4 | | | |
| 9.BF3-Es. | 3.916 | 0.401 | -0 | -0 | -0.1 | -0 | -0.2 | -0.2 | .24* | .25* | -0.7 | | |
| 10.BF4-Co. | 3.744 | 0.298 | 0.03 | -0 | 0.01 | -0.1 | -0 | -0.1 | .42** | .38** | .33** | -0.6 | |
| 11.BF5-Oe. | 3.478 | 0.295 | .20* | .21* | 0.13 | 0.2 | 0.08 | 0.1 | .46** | .53** | 0.03 | 0.1 | -0.5 |

Summary of Significant Findings

Human capability and cognitive ability



Human capability and personality



Conclusions

- 1) Human capability as assessed by Jaques' method and cognitive ability are moderately related but they do not seem to be measuring the same construct.
- 2) Personality factors –as assessed by the 16PF-IPIP do not seem to affect the assessment of human capability.

More research is needed to examine Jaques' theory. Further integration of Jaques' theory into the I/O field has the potential to improve our methods of assessing employees and help organizations make better, more valid decisions.

Acknowledgments

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