



## Corrigendum

## The genetics and evolution of the general factor of personality [Journal of Research in Personality 42 (2008) 1173:1185]

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## ABSTRACT

A correction is made to a previously published paper on the General Factor of Personality (GFP) [Rushton, J. P., Bons, T. A., & Hur, Y.-M. (2008). The genetics and evolution of a general factor of personality. *Journal of Research in Personality*, 42, 1173–1185].

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Rushton, Bons, and Hur (2008) reported a series of studies addressing the hypothesis of a general factor of personality. One of those studies involved data from an earlier sample of 214 participants who had provided self-reports on the Personality Research Form (PRF) and the Jackson Personality Inventory (JPI) (Ashton, Jackson, Helmes, & Paunonen, 1998). Rushton et al. (2008) conducted a principal components analysis of the 36 scales of those inventories (i.e., excluding the Infrequency scale), extracting five components and rotating them to a varimax solution. Those five factors broadly resembled the well-known Big Five personality dimensions.

Rushton et al. (2008) then computed scores for each of the 214 participants on five composite scales, one for each of the five factors. The composite representing a given factor was calculated as the standard-scored aggregate of the scales that defined (i.e., showed their primary loading on) that factor. When one principal component was extracted from those five composite scales, the loadings of the scales were .69 for Emotional Stability, .64 for Extraversion, .61 for Openness to Experience, .59 for Emotional Stability, and .50 for Agreeableness.

The purpose of the present article is to note an error in the calculation of the five composite scales, and to note the effect of that error on the subsequent principal components analysis. The error in the computation of the composite scales is that PRF/JPI scales having negative primary loadings on a given factor were assigned positive weights in computing the composite, as were the PRF/JPI scales having positive primary loadings. Because four of the five factors had at least one scale with a negative primary loading, this error affected four of the five composite scales.

This error in the calculation of the composite scales has an important influence on the correlations between the scales. For the five incorrectly-calculated composite scales, all of the 10 inter-correlations were positive, ranging from .07 to .39; this matrix yields a first principal component as described above. By contrast, for the five correctly-calculated composite scales, the intercorrelations ranged from  $-.28$  to  $.32$ , and four of the 10 intercorrelations were negative. When a first principal component is extracted from this matrix, the loadings are as follows: Openness to Experience, .86; Extraversion, .64; Agreeableness,  $-.40$ ; Emotional Stability, .37; Conscientiousness,  $-.26$ .

Thus, when the composite scales are computed with the appropriate reverse-scoring, the pattern of loadings on the first principal component—and hence the interpretation of that component—is much different from what is obtained when the composite scales are computed without that reverse-scoring. Rather than being defined positively and about equally by all five composite scales, that component is defined negatively by two of the five scales.

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## References

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