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CORRIGENDUM

Corrigenda to Satorra, A., and Bentler, P.M. (2010), "Ensuring Positiveness of the Scaled Difference Chi-Square Test Statistic," *Psychometrika, 75*, pp. 243–248.

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On page 245, lines 3 and 4, of the published paper, we find the following text:

"Since $\text{tr}\{U_d\Gamma\}$ can be expressed as the trace of the product of two positive definite matrices, $\text{tr}\{U_d\Gamma\} > 0$, and thus $c_d > 0$;"

This text should be replaced with:

"Since $\text{tr}\{U_d\Gamma\}$ can be expressed as the trace of a positive definite matrix, $\text{tr}\{U_d\Gamma\} > 0$, and thus $c_d > 0$;"

The uncorrected text claims that U_d and Γ are positive definite matrices, but U_d can't be positive definite, since its rank (difference between the ranks of the derivatives of the two models involved) is much less than its order.

The expression $\text{tr}\{U_d\Gamma\}$ could be written differently so that the conclusion still holds. Namely, write $U_d = V\Pi P^{-1}A'(AP^{-1}A')^{-1}AP^{-1}\Pi'V$ (formula (4) of the paper) as $U_d = FF'$, where $F = V\Pi P^{-1}A'(AP^{-1}A')^{-1/2}$; then, $\text{tr}\{U_d\Gamma\} = \text{tr}\{FF'\Gamma\} = \text{tr}\{F'\Gamma F\}$, where $F'\Gamma F$ is a positive definite matrix, given that Γ is positive definite in the setup of the paper.

For rewriting the alternative expression of $\text{tr}\{U_d\Gamma\}$, we used the well-known matrix algebra result that $\text{tr}\{MN\} = \text{tr}\{NM\}$ for matrices M and N of dimensions conformable with the products; in our application, $M = F$ and $N = F'\Gamma$.