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Author Correction: Corruption of the Pearson correlation coefficient by measurement error and its estimation, bias, and correction under different error models

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Correction to: *Scientific Reports* https://doi.org/10.1038/s41598-019-57247-4, published online 16 January 2020

This Article contains errors in the Equations (39), (41), (48), and (78).

Equation 39:

$$A^m = \frac{1}{\sqrt{1+\left(1+\frac{\mu_{x_0}^2}{\sigma_{x_0}^2}\right)\left(\frac{\sigma_{mu_x}^2}{\sigma_{x_0}^2}+\frac{\sigma_{mc}^2}{\sigma_{x_0}^2}\right)}\sqrt{1+\left(1+\frac{\mu_{y_0}^2}{\sigma_{y_0}^2}\right)\left(\frac{\sigma_{mu_y}^2}{\sigma_{y_0}^2}+\frac{\sigma_{mc}^2}{\sigma_{y_0}^2}\right)}}. \tag{39}$$

should read:

$$A^m = \frac{1}{\sqrt{1+\left(1+\frac{\mu_{x_0}^2}{\sigma_{x_0}^2}\right)\left(\sigma_{mu_x}^2+\sigma_{mc}^2\right)}\times\sqrt{1+\left(1+\frac{\mu_{y_0}^2}{\sigma_{y_0}^2}\right)\left(\sigma_{mu_y}^2+\sigma_{mc}^2\right)}} \tag{39}$$

Equation 41:

$$A^r = \frac{1}{\sqrt{1+\left(1+\frac{\mu_{x_0}^2}{\sigma_{x_0}^2}\right)\left(\frac{\sigma_{mu_x}^2}{\sigma_{x_0}^2}+\frac{\sigma_{mc}^2}{\sigma_{x_0}^2}\right)+\frac{\sigma_{au_x}^2}{\sigma_{x_0}^2}+\frac{\sigma_{ac}^2}{\sigma_{x_0}^2}}\sqrt{1+\left(1+\frac{\mu_{y_0}^2}{\sigma_{y_0}^2}\right)\left(\frac{\sigma_{mu_y}^2}{\sigma_{y_0}^2}+\frac{\sigma_{mc}^2}{\sigma_{y_0}^2}\right)+\frac{\sigma_{au_y}^2}{\sigma_{y_0}^2}+\frac{\sigma_{ac}^2}{\sigma_{y_0}^2}}}. \tag{41}$$

should read:

$$A^r = \frac{1}{\sqrt{1+\left(1+\frac{\mu_{x_0}^2}{\sigma_{x_0}^2}\right)\left(\sigma_{mu_x}^2+\sigma_{mc}^2\right)+\frac{\sigma_{au_x}^2}{\sigma_{x_0}^2}+\frac{\sigma_{ac}^2}{\sigma_{x_0}^2}}\times\sqrt{1+\left(1+\frac{\mu_{y_0}^2}{\sigma_{y_0}^2}\right)\left(\sigma_{mu_y}^2+\sigma_{mc}^2\right)+\frac{\sigma_{au_y}^2}{\sigma_{y_0}^2}+\frac{\sigma_{ac}^2}{\sigma_{y_0}^2}}}. \tag{41}$$

Equation 48:

$$A^r = \frac{1}{\sqrt{1+\left(1+\frac{\mu_{x_0}^2}{\sigma_{x_0}^2}\right)\left(\frac{\sigma_{mu_x}^2}{\sigma_{x_0}^2}+\frac{\sigma_{mc_x}^2}{\sigma_{x_0}^2}\right)+\frac{\sigma_{au_x}^2}{\sigma_{x_0}^2}+\frac{\sigma_{ac_x}^2}{\sigma_{x_0}^2}} \times \sqrt{1+\left(1+\frac{\mu_{y_0}^2}{\sigma_{y_0}^2}\right)\left(\frac{\sigma_{mu_y}^2}{\sigma_{y_0}^2}+\frac{\sigma_{mc_y}^2}{\sigma_{y_0}^2}\right)+\frac{\sigma_{au_y}^2}{\sigma_{y_0}^2}+\frac{\sigma_{ac_y}^2}{\sigma_{y_0}^2}}}. \tag{48}$$

should read:

$$A^r = \frac{1}{\sqrt{1+\left(1+\frac{\mu_{x_0}^2}{\sigma_{x_0}^2}\right)\left(\sigma_{mu_x}^2+\sigma_{mc_x}^2\right)+\frac{\sigma_{au_x}^2}{\sigma_{x_0}^2}+\frac{\sigma_{ac_x}^2}{\sigma_{x_0}^2}} \times \sqrt{1+\left(1+\frac{\mu_{y_0}^2}{\sigma_{y_0}^2}\right)\left(\sigma_{mu_y}^2+\sigma_{mc_y}^2\right)+\frac{\sigma_{au_y}^2}{\sigma_{y_0}^2}+\frac{\sigma_{ac_y}^2}{\sigma_{y_0}^2}}}. \tag{48}$$

Equation 78:

$$A^m = \frac{1}{\sqrt{1+\left(1+\frac{\mu_{x_0}^2}{\sigma_{x_0}^2}\right)\left(\frac{\sigma_{mu_x}^2}{\sigma_{x_0}^2}+\frac{\sigma_{mc_x}^2}{\sigma_{x_0}^2}\right)}\sqrt{1+\left(1+\frac{\mu_{y_0}^2}{\sigma_{y_0}^2}\right)\left(\frac{\sigma_{mu_y}^2}{\sigma_{y_0}^2}+\frac{\sigma_{mc_y}^2}{\sigma_{y_0}^2}\right)}}. \tag{78}$$

should read:

$$A^m = \frac{1}{\sqrt{1+\left(1+\frac{\mu_{x_0}^2}{\sigma_{x_0}^2}\right)\left(\sigma_{mu_x}^2+\sigma_{mc_x}^2\right)} \times \sqrt{1+\left(1+\frac{\mu_{y_0}^2}{\sigma_{y_0}^2}\right)\left(\sigma_{mu_y}^2+\sigma_{mc_y}^2\right)}} \tag{78}$$

In addition, in the Material and Methods section, under the subheading 'Software', the link where the data are available has been changed, from 'systemsbiology.nl under the SOFTWARE tab' to: https://github.com/esaccenti/CorrelationCorruption.