

CORRECTION

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Correction: Path-level interpretation of Gaussian graphical models using the pair-path subscore

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Following publication of the original article [1], the authors would like to add additional references and a paragraph under the heading Methods. The additional paragraph and references are given below.

Equation (9) had previously been stated in [2]. This paper goes on to use what we have called γ_p (equation (10), the unsigned numerator in PPS) as a measure of the contribution of a path to the correlation between its terminal nodes. Additional papers ([3] and [4]) discuss the interpretation of these path weights and expand the concept to path-level decompositions of other measures of association between network nodes. We note that, in these papers, the quantity of interest is γ_p , whereas in this paper the quantity of interest is the PPS (12), and we provide a detailed account of its properties and behavior when applied to real data. A key difference between the PPS and the γ_p is that the PPS measures the proportion of the correlation attributable to a path, whereas γ_p gives the raw contribution. Also distinctive in our paper is the availability of a software package to implement PPS. Our software can also be used to implement the methods of [2], [3], and [4], since the γ_p themselves are also available.

[2] Jones, B., West, M.: Covariance decomposition in undirected gaussian graphical models. *Biometrika* 92, 779–786 (2005)

[3] Roverato, A., Castelo, R.: The networked partial correlation and its application to the analysis of genetic interactions. *Journal of the Royal Statistical Society Series C*, 647–665 (2016)

[4] Roverato, A., Castelo, R.: Path weights in concentration graphs. *Biometrika* 107, 705–722 (2020)

The original article [1] has been corrected.

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Reference

1. Gill NP, et al. Path-level interpretation of Gaussian graphical models using the pair-path subscore. *BMC Bioinform.* 2022;23:12. <https://doi.org/10.1186/s12859-021-04542-5>.

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