

Review of: "Decoding the Correlation Coefficient: A Window into Association, Fit, and Prediction in Linear Bivariate Relationships"

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Potential competing interests: No potential competing interests to declare.

The article states, "Correlation is often misused but possesses interesting qualities beyond a simple measure of association or tightness." I agree that Pearson correlation is often assumed to measure "tightness" of two real vectors of dimension $n > 3$ when neither is a multiple of $1 = (1, 1, \dots, 1)$. However, a correlation of 1 means the two vectors are linearly related as $Y = mX + b$ with $m > 0$. But in fact, in all such dimensions there are pairs of vectors with correlation 1 and dot product 0 (orthogonal)--not very "tight". That is what Pearson correlation does. There are many associated types of pitfalls.