***eLife’s* transparent reporting form**

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**Sample-size estimation**

* You should state whether an appropriate sample size was computed when the study was being designed
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* If no explicit power analysis was used, you should describe how you decided what sample (replicate) size (number) to use

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In this method development study, we estimate the statistical power using simulations and asymptotic calculations (Figures 2 and 3, Supplementary Figures 2-11). We also develop a freely available online power calculator that allows investigators to explore the power using our method in their own studies (<https://evansgroup.di.uq.edu.au/ADOPTED/>). More information can be found in the Method section.

**Replicates**

* You should report how often each experiment was performed
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* Statistical analysis methods should be described and justified
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* For each experiment, you should identify the statistical tests used, exact values of N, definitions of center, methods of multiple test correction, and dispersion and precision measures (e.g., mean, median, SD, SEM, confidence intervals; and, for the major substantive results, a measure of effect size (e.g., Pearson's r, Cohen's d)
* Report exact p-values wherever possible alongside the summary statistics and 95% confidence intervals. These should be reported for all key questions and not only when the p-value is less than 0.05.

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Statistical methods are available in the Method section. Parameters used in the simulations can be found in the Method section and Figure legends. P-values are reported along with the effect estimates and standard errors in the Tables.

(For large datasets, or papers with a very large number of statistical tests, you may upload a single table file with tests, Ns, etc., with reference to sections in the manuscript.)

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* Indicate how samples were allocated into experimental groups (in the case of clinical studies, please specify allocation to treatment method); if randomization was used, please also state if restricted randomization was applied
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R code for data analysis is available in the Supplementary Materials.