



Corrigendum

Corrigendum to “Macroscopic Complementary Relation Between Subjective Observations and Objective Measurements of Colors” and to “Acausal Psychophysical Correlations in a Causally Closed World? Evidence from (Un)Confounded Erasure Paradigms and the Limits of Physicalist Methodology”¹

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Nature of the error

The permutation analyses reported in Maier and Dechamps (2025) were described in the article as operating on the subjective likability weighted-mean scores of the colors used in the studies. The observed difference was indeed computed as a weighted mean, but the analysis script that generated the permutation distribution averaged the shuffled color means without weights, so that each color entered the null distribution with equal weight regardless of how many participants had rated it. The observed statistic and the null distribution against which it was compared therefore referred to two different quantities. All permutation p-values reported in that article are affected. The error was identified by Peter Bancel, who re-examined the analysis and brought the discrepancy to our attention.

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¹ This corrigendum concerns Maier and Dechamps (2025), published in *Journal of Anomalistics*, 25(1), 15–60, and Maier and Dechamps (2026), published in *Journal of Anomalistics*, 26(1), 120–145.

The consequence of the error runs in the conservative direction. Colors rated by few participants have noisier means, and giving them equal weight widens the null distribution. Comparing a weighted observed difference against an unweighted null therefore understates the evidence, and the corrected values are smaller than those published.

The analyses have been recomputed with the color means weighted by the number of participants who rated each color, the weights travelling with the colors as they are reassigned. This is the analysis the article describes. The re-computation used 500,000 permutations; for Studies 3 and 4 all 2,704,156 possible assignments were enumerated exactly, so that value carries no Monte Carlo error. The corrected scripts and data are available at the OSF project of the original article (<https://osf.io/u2zqp>).

The permutation analyses of Studies 6 and 7, reported in Maier and Dechamps (2026), are not affected. Those studies used a within-subjects design in which every color received the same number of ratings, so that the weighted and the unweighted color mean coincide and the choice between them has no consequence. Their permutation analyses were in addition computed within participants. The values of .33 and .14 that enter the combined tests therefore stand as published.

No other analyses in either article are affected. The Bayesian t-tests, the multilevel models, the non-parametric supplementary analyses, the effect sizes, the directional sign test across the seven studies, and the meta-regression on the seven effect sizes all remain as published.

Table 1

Permutation p-Values Reported in Maier and Dechamps (2025), as Published and as Corrected

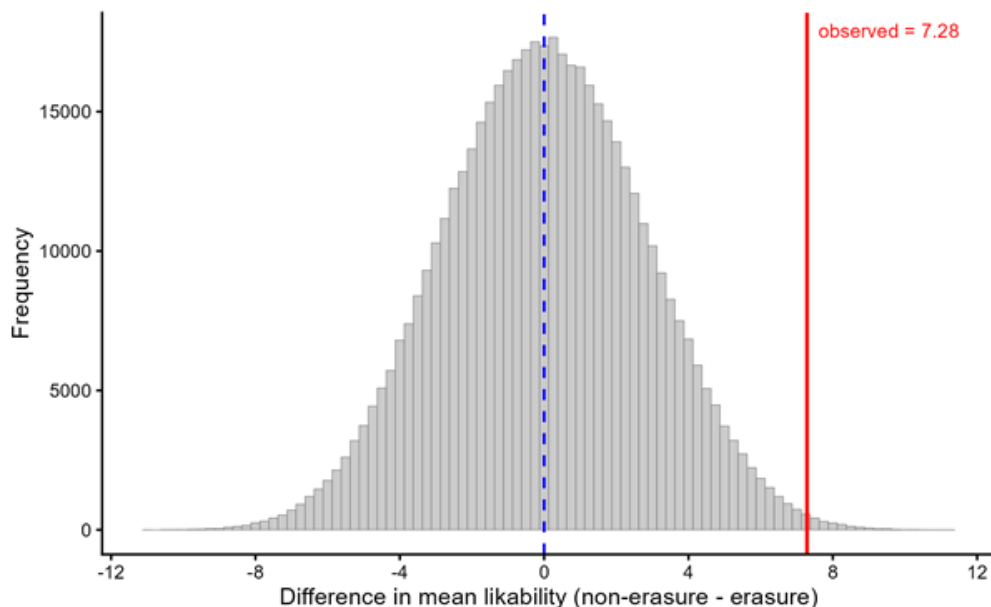
Analysis	Published	Corrected
All four studies (primary analysis)	.005	.003
Studies 3 and 4 only	.05	.022
Bayes-factor-trimmed, all four studies	.03	.009
Bayes-factor-trimmed, Studies 3 and 4 only	.10	.041

Note. All values are one-sided. The two values for Studies 3 and 4 are exact, obtained by complete enumeration of all assignments; the other two are based on 500,000 permutations. The corresponding two-sided values for the two untrimmed analyses are .007 and .045. See the section on the direction of the tests below.

The values in the first two rows are reported in the article at p. 46, those in the last two rows in footnote 3 at p. 47. Figure 5 (p. 46) displays the permutation distribution obtained under the unweighted procedure and is superseded by Figure 1 below.

Figure 1

Permutation Distribution of the Weighted Mean Difference Across All Four Studies



Note. 500,000 permutations of the 36 color-means, averaged with the number of ratings per color. The red line marks the observed difference of 7.28 points, the dashed blue line the null value of zero. This figure supersedes Figure 5 in Maier and Dechamps (2025), which shows the corresponding unweighted distribution.

Consequences for Maier and Dechamps (2025)

All four analyses remain below the conventional significance threshold after the correction, and each is more extreme than the value published. The conclusion drawn from the primary analysis, namely that a chance assignment of the specific 36 colors to the experimental conditions is an unlikely explanation of the observed likability difference of 7.28 points, is unchanged and rests on firmer ground than the published value indicated. The two restricted analyses, which the article reported at $p = .05$ and $p = .10$, now stand at $p = .022$ and $p = .041$ and support the same conclusion independently.

One point in the original article requires amendment. The statement at p. 47 that a low probability of p equal to or below .05 was found in both permutation analyses, and the corresponding summary at p. 48, should be read with the corrected values, that is $p = .003$ across all four studies and $p = .022$ for Studies 3 and 4.

Consequences for Maier and Dechamps (2026)

The authors' response published in *Journal of Anomalistics*, 26(1) combines three independent permutation p -values, one from the four-study analysis of Maier and Dechamps (2025) and one each from Studies 6 and 7. The first of these inputs changes from .005 to .003, and the two combined tests reported at p. 136 change accordingly.

Table 2

Combined Probability Tests Reported in Maier and Dechamps (2026), as Published and as Corrected

Test	Published	Corrected
Fisher (1932) combined probabilities	$\chi^2(6) = 16.75, p = .010$	$\chi^2(6) = 17.47, p = .008$
Edgington (1972) additive combination	$p = .018$	$p = .018$

Note. Both combinations are computed from one-sided permutation p -values, and from the unrounded values rather than the rounded ones shown in Table 1; recomputing them from the rounded values will not reproduce the test statistics exactly. See the following section.

The corrected values apply to the passage at p. 136 in which the two combined tests are reported, to the summary at p. 139, to the English abstract at pp. 120–121, and to the German abstract at pp. 144–145. Both combinations remain below the conventional threshold, and the conclusion that the biased-colors alternative can be ruled out as a joint explanation across the three independent 36-color sets is unchanged.

Direction of the permutation and combination tests

The permutation analyses are reported one-sided, as in the original article, and it is worth making the reasoning behind this explicit, since it was not stated there. The analyses constitute the third step of the research agenda set out in the original article, in which a specific alternative explanation is excluded retrospectively rather than a hypothesis being tested prospectively. The alternative in question, that the more likeable colors happened to be assigned to the non-erasure condition, is itself directional, and its direction could only be established once the series of studies was complete. The direction was therefore determined after data collection (after

Studies 1 and 2) and then entered the permutation analyses, and the reported values are the probabilities that a chance assignment of colors would favor the non-erasure condition by at least the observed margin.

For Study 6 the one-sided form of the permutation test was fixed in advance. The preregistered analysis plan specifies the comparison as the mean likability difference between the stored and the deleted condition, in that order, and expects that difference to occur in fewer than five percent of the permutations (<https://osf.io/mkv6x>). Study 7 was not preregistered but followed the same protocol, analysis plan, and stopping rule. The Fisher and Edgington procedures carry no direction of their own; they combine whatever values are supplied to them. The direction of the combined results is therefore determined entirely by the three input values, of which two were fixed before the respective studies were run and one, the four-study permutation analysis of Maier and Dechamps (2025), was determined after the data had been seen.

Because the direction of that one input was established from the same data over which the permutations were computed, and because a reader may also wish to set aside Studies 1 and 2 on exchangeability grounds, Table 3 reports the combined tests under each of these adjustments. The two-sided values are read directly from the permutation distribution.

Table 3

Combined Tests Under Alternative Treatments of the Maier and Dechamps (2025) Input Value

Input value used	Fisher	Edgington
All four studies, one-sided ($p = .003$)	$\chi^2(6) = 17.47, p = .008$	$p = .018$
All four studies, two-sided ($p = .007$)	$\chi^2(6) = 16.10, p = .013$	$p = .018$
Studies 3 and 4, one-sided ($p = .022$, exact)	$\chi^2(6) = 13.74, p = .033$	$p = .020$

Note. The one-sided values for Studies 6 and 7 are retained throughout, since the direction was fixed before those studies were run. As in Table 2, the combinations are computed from the unrounded permutation values. The value entered for Studies 3 and 4 is the exact one obtained by complete enumeration.

No two-sided variant is listed for the analysis restricted to Studies 3 and 4. The reason for reading the four-study value two-sided is that its direction was established from the same data over which the permutations were computed. Once Studies 1 and 2 are set aside, the direction derives from data outside the analysis, and the one-sided form needs no adjustment. Under every treatment in Table 3 both combinations remain below the conventional threshold. The corresponding two-sided value for the directional sign test across the seven studies is $p = .016$.

Consequences for the conclusions of the two articles

The substantive conclusions of both articles stand, and the correction strengthens rather than weakens the evidence reported for them. The erasure effect on subjective likability appeared in the predicted direction in every one of the seven studies in this paradigm, and the directional sign test across those seven studies is unaffected by the present correction at $p = .008$ one-sided, or .016 if the direction is treated as having been determined from the data. The combined permutation analysis across three independently drawn 36-color sets continues to exclude the biased-colors confound as a joint explanation, at $p = .008$ by Fisher and $p = .018$ by Edgington. We regret that the error escaped us before publication.

References

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Acknowledgment

We thank Peter Bancel for identifying the discrepancy between the analyses as described and the analyses as implemented, for bringing it to our attention, and for independently re-examining them.