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Erratum to: A revised method for analyzing neglect using the landmark task [*Cortex*, 40: 415–431, 2004]

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We would like to inform the readers of *Cortex* about two mistakes we found in our article in *Cortex*, 40: 415–431, 2004. These concern the computation of the confidence interval for PB, Bisiach et al.'s [*Brain and Cognition*, 37: 369–386, 1998] index of Input-Related Neglect (IRN), and of the confidence interval for M, our index of Output-Related Neglect (ORN). The correct equations for computing CI(PB) and CI(M) are reported below.

An amended electronic worksheet for the automatic computation of all the indices can be downloaded from the following websites.

First: www-1.unipv.it/webpsyco/toraldo/toraldo.htm or psicologia.unipv.it/toraldo/toraldo.htm

Second: www.toraldo.it/alessio

Third: www.sinp-web.org/site/index.php?page=pubblicazioni (www.sinp-web.org, click on "Pubblicazioni", search for "Land mark Task"); automatic links to downloads: www.sinp-web.org/site/uploads/Instructions%20Landmark%20Analysis.doc; www.sinp-web.org/site/uploads/Worksheet%20Landmark%20Analysis%20t=9.xls

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1. Results

We report here an amended Table II, which should replace the old Table II (p. 422 in the original paper). Changes in diagnostic outcome from the old Table to the new Table are reported in **bold**. There is no change in the diagnostic outcome obtained by using CI(M), as the size of the correction is small. By contrast, correct CI(PB) are much narrower than those originally reported, thus leading to more cases of Input-Related Neglect diagnosed by means of CI(PB). While in the original paper we diagnosed 5/18 patients as suffering from IRN using the CI(PB) criterion (p. 423, second column), the correct conclusion is that 8/18 are to be classified as such. These eight patients are exactly the same that were diagnosed an IRN by using CI(PSE).

This identity of classification using confidence intervals for Bisiach et al.'s PB and for our PSE would seem to suggest that the two methods are equivalent. This is not the case. As we discussed in the Introduction of the original paper, PSE and PB are expected to diverge significantly only in cases with severe concomitant ORN (see 'constraint of the diamond', Fig. 1 of the original article). In the sample analyzed ($N = 18$) no patients suffered from severe response bias (ORN) so it is not surprising that the two methods gave similar results. That the two methods must diverge in cases of sizeable ORN remains a mathematical necessity.

2. Correct equations

In the following, we report correct equations and amendments to the mathematics of the original article. All notations are identical to those specified in that article. We apologise for any inconvenience caused by use of incorrect formulae.

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Table II – Results of the analyses.

Patient	Can	Bisiach et al.'s method		New model's parameters				
		PB	CI(PB)	PSE	CI(PSE)	SD	M	CI(M)
S.L.		53.7	[50.3, 57.1]	.94	[.01, 1.87]	1.07	.04	[−.03, .11]
D.B.		*31.5*[b]	*[28.9, 34.0]*[b]	*−10.00*[b]	*[−12.25, −7.75]*[b]	1.71	.04	[−.01, .09]
J.B.		*56.5*[a]	[53.3, 59.6]	*2.50*[a]	[1.48, 3.52]	.85	−.02	[−.08, .04]
J.C.		55.6	[55.6, 55.6]	*2.50*[a]	[1.48, 3.52]	.85	.00	[.00, .00]
J.L.		*65.7*[a]	*[63.9, 67.6]*[a]	*10.00*[a]	*[7.75, 12.25]*[a]	1.71	.02	[−.02, .05]
A.L.		55.6	[51.0, 60.1]	.94	[.02, 1.86]	1.07	.00	[−.09, .09]
M.M.		50.0	[46.2, 53.8]	.42	[−.59, 1.43]	1.42	−.04	[−.11, .04]
C.S.	+	*61.1*[a]	[54.9, 67.3]	*10.13*[a]	[.94, 19.31]	17.13	*−.22*[b]	*[−.35,−.10]*[b]
R.D.		55.6	[50.6, 60.6]	*3.13*[a]	[.46, 5.79]	4.46	*−.11*[b]	[−.21, −.01]
N.McL.	+	*56.5*[a]	[49.2, 63.8]	*5.00*[a]	[−1.04, 11.04]	12.25	*.13*[a]	[−.02, .28]
L.McN.		52.8	[47.6, 58.0]	*3.00*[a]	[.12, 5.88]	5.34	.06	[−.05, .16]
W.McI.		*63.9*[a]	**[59.2, 68.6]**[a]	*10.00*[a]	*[3.80, 16.20]*[a]	11.64	.06	[−.04, .15]
M.McP.		*79.6*[a]	*[74.4, 84.9]*[a]	*33.75*[a]	*[21.55, 45.95]*[a]	19.72	.04	[−.07, .14]
W.P.	+	*86.1*[a]	*[83.7, 88.5]*[a]	*45.00*[a]	*[37.25, 52.75]*[a]	5.12	−.06	[−.10, −.01]
J.H.	+	*66.7*[a]	**[60.4, 73.0]**[a]	*12.50*[a]	*[6.05, 18.95]*[a]	11.46	*.07*[a]	[−.05, .20]
R.M.	+	54.6	[48.0, 61.3]	*7.83*[a]	[−.20, 15.86]	16.73	*−.09*[a]	[−.23, .04]
L.A.	+	*64.8*[a]	**[58.2, 71.4]**[a]	*12.50*[a]	*[6.10, 18.90]*[a]	11.46	.00	[−.13, .13]
D.L. (*lbd*)	−	*20.4*[b]	*[17.3, 23.4]*[b]	*−22.50*[b]	*[−26.61, −18.39]*[b]	2.56	−.07	[−.13, −.01]
Normal range ($n = 12$)		[44.0, 55.8]		[−2.23, 2.11]		≤1.41		[−.076, .061]

Values in *italic* indicate values (or confidence intervals) outside the normal range reported at the bottom. Normal ranges were derived from the mean ± 1.96 standard deviations (SDs) of our 12 controls' scores, with the exception of SD where a unidirectional 5% cut-off was set at the mean + 1.645 SD.
Can: Albert line cancellation performance, +Left neglect, −Right neglect. PB, CI(PB): Bisiach et al.'s (1998a) parameter and its 95% confidence interval. PSE: estimated point of subjective equality, in mm of distance from the true centre, −leftwards, +rightwards. CI(PSE): 95% confidence intervals for PSE. SD: estimated SD (a measure inversely proportional to the slope of the normal cumulative). *M*: measure of Output Related Neglect, a linear transformation of Bisiach et al.'s RB; CI(*M*): 95% confidence interval for *M*.
a Left neglect.
b Right neglect.

2.1. *Standard error and confidence interval for* M

The correct formula for computing the standard error of parameter *M* is

$$SE(M) = \frac{1}{t}\sqrt{\frac{rl_1(1-rl_1)+\ldots+rl_t(1-rl_t)+ls_1(1-ls_1)+\ldots+ls_t(1-ls_t)}{N-1}}$$

The denominator within the square root is $N-1$ and not N as indicated in the original paper (p. 426, first column).

As a consequence, the formula for CI(*M*) reported in the computation sheet of Fig. 4 (page 428 of the original paper) becomes

$$CI(M) = \left[M - .0974\sqrt{(C+D)}, M + .0974\sqrt{(C+D)}\right]$$

with the correct scalar being .0974 and not .0882. Hence, in the example shown on page 429 (Fig. 5), the resulting CI(*M*) is [.118, .401] and not [.132, .386].

2.2. *Standard error and confidence interval for PB*

The confidence interval for PB, CI(PB), is 50 times as wide as CI(*M*) – not 100 times, as wrongly stated in the original article (Footnote 3 on page 423). The correct equation for SE(PB), from which CI(PB) is then computed, is

$$SE(PB) = \frac{100}{2t}\sqrt{\frac{rl_1(1-rl_1)+\ldots+rl_t(1-rl_t)+ls_1(1-ls_1)+\ldots+ls_t(1-ls_t)}{N-1}} = 50\,SE(M)$$

$$CI(PB) = [PB - 1.96\ SE(PB), PB + 1.96\ SE(PB)]$$

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