

Erratum

Erratum for the doctoral dissertation “The aging episodic memory and factors which influence it: An electrophysiological investigation” submitted by Anna-Lena Scheuplein, 2015.

- 1) In section 6.3.1:
 - Page 81: Degrees of freedom for the one-way ANOVA on performance in the DS, CST and MWT (1/50) must be replaced with (1/49).
 - Table 3, page 82: Digit Span task must be replaced with Digit Symbol.
- 2) In section 6.4.1 the mean RT-values and SEMs are incorrect, due to the inclusion of participants that were excluded from all other analyses. The following replacements have to be made:

a. page 87, Table 4, mean RT-values and SEMs:

	Young Adults		Old Adults	
	Plausible	Implausible	Plausible	Implausible
RT				
<i>old</i>	1986 (198)	2348 (199)	2177 (135)	2537 (211)
<i>recombined</i>	2273 (165)	2669 (232)	2512 (189)	2623 (206)
<i>new</i>	1900 (169)	1886 (141)	2197 (154)	2283 (201)

must be replaced with:

	Young Adults		Old Adults	
	Plausible	Implausible	Plausible	Implausible
RT				
<i>old</i>	1777 (175)	2242 (182)	2047 (118)	2384 (168)
<i>recombined</i>	2314 (158)	2685 (221)	2688 (179)	2767 (210)
<i>new</i>	1808 (132)	1816 (135)	2050 (145)	2144 (200)

b. The results of the RT analyses are confirmed to remain correct, except of one typing error causing a wrong F- and p-value on page 89:

(YA: old: $F(1,20) = 12.76, p < .01$; new: $p = .91$; recombined: $F(1,20) = 15.06, p < .001$) must be replaced with (YA: old: $F(1,20) = 34.45, p < .001$; new: $p = .91$; recombined: $F(1,20) = 11.21, p < .01$).

- 3) In section 6.4.3, the outcome of the global ANOVA is incorrect, due to one transposed digit in the syntax of the analysis of the global ANOVA. When performed correctly, the six-way interaction is not significant any more. The following replacements have to be made:

a. page 92-93:

“These outcomes demonstrate that effects of item status differ in their size and distribution according to age group, encoding condition and time window. The six-way interaction was deconstructed in two different ways: First, it was followed-up by time-window- and encoding-condition-specific analyses to investigate age-related differences in encoding condition-specific

old/new effects and second, it was also followed-up by time-window- and item-status-specific analyses to investigate item status-specific differences across conditions. Subsequent analyses were further followed-up by the factor Group.”

must be replaced with:

“These outcomes demonstrate that effects of item status differ in their size according to age group and encoding condition and that effects of item status and encoding condition differ in their distribution according to the time window. Given these interactions and licensed by the specific directed hypotheses about effects of age and encoding condition on the early and late old/new effects, we performed separate follow-up analyses, even though the six-way interaction was not significant ($p=.17$). We performed time-window- and encoding-condition-specific follow-up analyses with the factors Item Status, Location, Laterality and Group to investigate age-related differences in encoding condition-specific old/new effects. We also performed time-window- and item-status-specific follow-up analyses with the factors Encoding Condition, Location and Laterality separately for each group to investigate item status-specific differences across conditions.”

b. page 93, Table 7, the global ANOVA:

The global ANOVA	<i>F</i>-value
IS, $F(1,46)$	65.15 ***
IS × GP, $F(1,46)$	30.09 ***
IS × Loc × TW, $F(2,92)$	5.40 *
EC × IS × Loc × Lat, $F(4,184)$	6.08 ***
EC × IS × Loc × Lat × GP, $F(4,184)$	2.26 ***
EC × IS × Loc × Lat × TW × GP, $F(4,184)$	9.14 ***

must be replaced with:

The global ANOVA	<i>F</i>-value
IS, $F(1,46)$	61.94 ***
IS × GP, $F(1,46)$	29.12 ***
EC × IS, $F(1,46)$	3.29, $p=.08$
IS × Lat × GP, $F(2,92)$	7.85 **
EC × Loc × Lat × TW, $F(4,184)$	4.60 **
IS × Loc × Lat × TW, $F(4,184)$	13.02 ***
IS × Lat × TW × GP, $F(4,184)$	2.65, $p=.09$
EC × IS × Loc × Lat × TW × GP, $F(4,184)$	1.71, $p=.17$

Errors in the follow-up analyses result from a shift in the line of the SPSS output or are due to a round-off or typing error, nevertheless the pattern of results of the follow-up analyses remain the same. The following replacements have to be made:

- c. page 93, Table 7, Follow-up by TW and EC:
IS × Loc × Lat, $F(4,184)=3.77^*$ must be replaced with $F(4,184)=3.89^{**}$.
- d. page 96, η_p^2 of late ERP effects in the plausible condition:
 - YA: C3 ($\eta_p^2 = .65$) must be replaced with C3 ($\eta_p^2 = .70$)
 - OA: F4 ($\eta_p^2 = .42$) must be replaced with F4 ($\eta_p^2 = .45$)
 - OA: C4 ($\eta_p^2 = .33$) must be replaced with C4 ($\eta_p^2 = .34$)
- 4) Section 6.5.2, page 98-99, η_p^2 of early and late ERP effects:
 - page 98, YA: $\eta_p^2 = .29$; $\eta_p^2 = .27$; $p=.19$ is incorrect due to a shifted line and must be replaced with $\eta_p^2 = .32$; $\eta_p^2 = .29$; $p=.29$
 - page 99, YA: plausible at P3: $\eta_p^2 = .45$ is incorrect due to a typing error and must be replaced with P3: $\eta_p^2 = .70$
- 5) Section 6.6, discussion, page 99:
[...] “while in latter condition it occurs at frontal ($\eta_p^2 = .37$) and central electrodes ($\eta_p^2 = .42$)” must be replaced with “while in latter condition it occurs at frontal ($\eta_p^2 = .42$) and central electrodes ($\eta_p^2 = .37$)”