

## Online Supplemental Materials: Memory Characteristics for Experiments 2-4

### Experiment 2

**Memories at elicitation.** All participants elicited all 30 autobiographical memories during the elicitation phase. We conducted a 3 (memory retrieval – *Rp+*, *Rp-* and *Nrp*) x 3 (cue valence – *positive*, *negative*, and *neutral*) repeated-measures ANOVA of mean memory generation latency (in seconds). As in Experiment 1, we found no main effect for cue valence,  $F(1, 112) = 0.022$ ,  $p = .883$ ,  $\eta_p^2 < .000$ . The other main and interaction effects were also not significant (all  $F$ 's  $< 1.54$ , all  $p$ 's  $> .27$ ).

For the memories used in the experiment, we conducted separate 3 (memory retrieval) x 3 (cue valence) repeated measures ANOVAs with the following dependent variables: (1) estimated age at the time of their memories (in years), (2) ratings of clarity, and (3) ratings of memory valence. There were main effects of cue valence for age, clarity and valence,  $F(1, 56) = 15.23$ ,  $p < .001$ ,  $\eta_p^2 = .120$ ,  $F(1, 56) = 5.75$ ,  $p = .018$ ,  $\eta_p^2 = .049$ , and  $F(1, 56) = 1417.85$ ,  $p < .001$ ,  $\eta_p^2 = .927$ , respectively. As in Experiment 1, participants generated memories (in years) from an earlier period of their life to negative cues ( $M = 22.62$ ,  $SD = 5.58$ ) than to neutral cues ( $M = 25.30$ ,  $SD = 6.19$ ) and positive cues ( $M = 25.52$ ,  $SD = 8.40$ ),  $t(56) = 4.58$ ,  $d = 0.45$ ,  $p < .001$  and  $t(56) = 3.90$ ,  $d = 0.38$ ,  $p < .001$ , respectively. There was no significant difference in age for memories elicited to positive and neutral cues,  $t(56) = 0.310$ ,  $d = -0.03$ ,  $p = .757$ . Memories elicited to positive cues ( $M = 6.10$ ,  $SD = 0.63$ ) were rated clearer than those elicited to negative cues ( $M = 5.90$ ,  $SD = 0.80$ ),  $t(56) = 2.40$ ,  $d = 0.28$ ,  $p = .018$ . However, no significant difference was found between the clarity ratings of positive and neutral cued memories ( $M = 5.97$ ,  $SD = 0.71$ ) or negative and neutral cued memories,  $t(56) = 1.57$ ,  $d = 0.19$ ,  $p = 0.12$  and  $t(56) = 0.74$ ,  $d = 0.09$ ,  $p = .461$ , respectively. Most importantly, participants rated memories elicited to positive cues ( $M = 6.27$ ,  $SD = 0.60$ ) as more positive/less negative to memories elicited to both neutral ( $M = 4.80$ ,  $SD =$

1.07) and negative cues ( $M = 2.44$ ,  $SD = 0.87$ ),  $t(56) = 13.57$ ,  $d = 1.70$ ,  $p < .001$  and  $t(56) = 37.65$ ,  $d = 5.13$ ,  $p < .001$ , respectively. Memories elicited to neutral cues were more positive/less negative than memories elicited to negative cues,  $t(56) = 19.98$ ,  $d = 2.42$ ,  $p < .001$ .

Overall, memories were from similar ages (except for negative cued memories which were slightly earlier in age) and also quite clear (positive and neutral cued memories the clearest). Positive, negative, and neutral cues elicited positive, negative, and neutral memories, respectively.

### Experiment 3

**Memories at elicitation.** During the elicitation phase, all participants elicited 30 autobiographical memories. We conducted a 3 (memory retrieval –  $Rp+$ ,  $Rp-$  and  $Nrp$ ) x 3 (cue valence – *positive*, *negative* and *neutral*) repeated-measures ANOVA of mean memory generation latency (in seconds). We found a main effect of cue valence  $F(1, 139) = 7.31$ ,  $p < .01$ ,  $\eta_p^2 = .05$ . There were no other significant main or interaction effects (all  $F$ 's  $< 1.78$ , all  $p$ 's  $> .23$ ). Participants took slightly longer to generate memories to neutral cues ( $M = 12.42$ ,  $SD = 8.43$ ) and negative cues ( $M = 11.94$ ,  $SD = 8.28$ ) than to positive cues ( $M = 10.07$ ,  $SD = 5.45$ ),  $t(139) = 3.29$ ,  $d = 0.06$ ,  $p < .01$  and  $t(139) = 2.71$ ,  $d = 0.33$ ,  $p < .01$ , respectively. Generally, participants generated the required number of memories within 10-15 seconds each.

For the memories used in the experiment, we conducted three separate 3 (memory retrieval) x 3 (cue valence) repeated measures ANOVAs with the following dependent variables: (1) estimated age at the time of their memories (in years), (2) ratings of clarity and (3) ratings of memory valence. There were main effects of cue valence for all three dependent variables: age of memories, clarity ratings and ratings of memory valence,  $F(1, 69) = 42.35$ ,  $p < .001$ ,  $\eta_p^2 = .234$ ,  $F(1, 69) = 17.80$ ,  $p = .001$ ,  $\eta_p^2 = .114$ , and  $F(1, 69) = 1578.04$ ,  $p < .001$ ,  $\eta_p^2 = .919$ , respectively. Participants generally elicited memories encoded at an earlier age (in years) to negative cues ( $M$

= 16.69,  $SD = 3.49$ ) than to neutral cues ( $M = 18.30$ ,  $SD = 2.87$ ) and positive cues ( $M = 18.55$ ,  $SD = 2.74$ ),  $t(69) = 4.79$ ,  $d = 0.50$ ,  $p < .001$  and  $t(69) = 6.51$ ,  $d = 0.59$ ,  $p < .001$ , respectively. The age of positive memories and neutral memories did not differ significantly,  $t(69) = .905$ ,  $d = 0.09$ ,  $p = .367$ . Memories elicited to positive cues ( $M = 5.63$ ,  $SD = 0.82$ ) were rated as clearer than those elicited to neutral cues ( $M = 5.43$ ,  $SD = 0.90$ ) and negative cues ( $M = 5.22$ ,  $SD = 0.91$ ),  $t(69) = 2.02$ ,  $d = 0.23$ ,  $p < .05$  and  $t(69) = 4.22$ ,  $d = 0.47$ ,  $p < .001$ , respectively. Memories elicited to neutral cues were rated as clearer than memories elicited to negative cues,  $t(69) = 2.07$ ,  $d = 0.23$ ,  $p < .05$ . Most importantly, participants rated memories elicited to positive cues ( $M = 6.26$ ,  $SD = 0.63$ ) as more positive/less negative than their memories elicited to both neutral ( $M = 4.43$ ,  $SD = 0.94$ ) and negative cues ( $M = 2.33$ ,  $SD = 0.92$ ),  $t(69) = 19.40$ ,  $d = 2.29$ ,  $p < .001$  and  $t(69) = 39.73$ ,  $d = 4.98$ ,  $p < .001$ , respectively. Memories elicited to neutral cues were also more positive/less negative than memories elicited to negative cues,  $t(69) = 21.77$ ,  $d = 2.26$ ,  $p < .001$ .

Generally, memories were from similar ages (except for negative cued memories which were slightly earlier in age) and also clear (positive cued memories the clearest). Positive, negative, and neutral cues elicited positive, negative, and neutral memories, respectively.

#### **Experiment 4**

**Memories at elicitation.** All participants elicited all 30 autobiographical memories during the elicitation phase. We conducted a 3 (memory retrieval –  $Rp+$ ,  $Rp-$  and  $Nrp$ ) x 3 (cue valence – *positive, negative and neutral*) repeated-measures ANOVA of mean memory generation latency (in seconds). As in Experiment 3, we found a main effect for cue valence,  $F(1, 112) = 6.50$ ,  $p = .012$ ,  $\eta_p^2 = .055$ . There were no other significant main or interaction effects (all  $F$ 's  $< 1.50$ , all  $p$ 's  $> .20$ ). Participants took slightly longer to generate memories to neutral cues ( $M = 18.20$ ,  $SD = 12.91$ ) and negative cues ( $M = 15.99$ ,  $SD = 10.99$ ) than to positive cues ( $M = 13.00$ ,

$SD = 7.64$ ),  $t(112) = 4.38$ ,  $d = 0.49$ ,  $p < .01$  and  $t(112) = 2.55$ ,  $d = 0.32$ ,  $p < .05$ , respectively.

Generally, participants generated the required number of memories within 10-20 s each.

For the memories used in the experiment, we conducted separate 3 (memory retrieval) x 3 (cue valence) repeated measures ANOVAs with the following dependent variables: (1) estimated age at the time of their memories (in years), (2) ratings of clarity, and (3) ratings of memory valence. There were main effects of cue valence for clarity and memory valence,  $F(1, 56) = 37.30$ ,  $p < .001$ ,  $\eta_p^2 = .25$  and  $F(1, 56) = 700.79$ ,  $p < .001$ ,  $\eta_p^2 = .862$ , respectively. Memories elicited to positive cues ( $M = 6.13$ ,  $SD = 0.67$ ) were rated clearer than those elicited to negative cues ( $M = 5.57$ ,  $SD = 0.83$ ) and to neutral cues ( $M = 5.47$ ,  $SD = 0.84$ ),  $t(56) = 6.11$ ,  $d = 0.74$ ,  $p < .001$  and  $t(56) = 7.28$ ,  $d = 0.87$ ,  $p < .001$ , respectively. Most importantly, participants rated memories elicited to positive cues ( $M = 6.19$ ,  $SD = 0.65$ ) as more positive/less negative than their memories elicited to both neutral ( $M = 4.81$ ,  $SD = 0.98$ ) and negative cues ( $M = 2.79$ ,  $SD = 1.05$ ),  $t(56) = 13.86$ ,  $d = 1.66$ ,  $p < .001$  and  $t(56) = 26.47$ ,  $d = 3.89$ ,  $p < .001$ , respectively. Memories elicited to neutral cues were more positive/less negative than memories elicited to negative cues,  $t(56) = 15.71$ ,  $d = 1.99$ ,  $p < .001$ . However, unlike Experiments 1-3 (and previous research, Barnier et al., 2004), participants generated memories from the same period of their life to negative cues ( $M = 22.72$ ,  $SD = 3.07$ ), neutral cues ( $M = 23.48$ ,  $SD = 3.52$ ) and positive cues ( $M = 22.68$ ,  $SD = 2.74$ ).

Overall, memories were from similar ages and clear (positive memories the clearest). Positive, negative, and neutral cues elicited positive, negative, and neutral memories, respectively.

## Online Supplemental Materials: Coding Scheme for Conversations

### (Experiments 3 & 4)

#### Classification of a Recalled Memory from a Category on the Basis of What was Said in a Conversation

If participant serves the role of:

	Speaker	Listener
Rp+	The speaker mentions a memory from a category.	The participant listens to the memory stated by the speaker. The mentioned memory is not the one supplied by the listener. It is assumed that the listener concurrently (albeit covertly) remembered the memory mentioned by the speaker from the category.
Nrp	No memory from the category mentioned by any participant.	No memory from the category mentioned by any participant.
Rp-	The speaker does not mention the memory, but a related memory from the same category is mentioned. As with Rp+, this is a response that was stated by the speaker from a category.	The speaker does not mention the memory, but does mention a related memory. The mentioned related memory is not the response supplied by the listener during the conversation, rather the response the speaker supplied in the conversation. Moreover, the listener never mentioned any response from the category.